Human agency in management accounting change

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3 Stability & Change: Making Sense of Experience when Scripts Break Down

3.1 Introduction

Organisations that strive for durable organisational change will have to address the issue of embedding this change in the daily tasks of different groups of employees. As chapter 2 argued, the efforts of Burns and Scapens (2000) offer an insight into the embedding of management accounting in day-to-day practices. Yet, the transition from the analytical ideas of their proposed framework to day-to-day observations within an organisational setting is rather difficult to make. Although their ideas form a useful framework for thought, they need to be expanded further. Their ideas in their current form do not answer two important questions: (1) how do institutionally constrained individuals recognise a need for management accounting change and decide to act upon this need; i.e., how does the decision for intervention materialise; and (2) how do these individuals give form to institutional change; i.e. how do individuals actually intervene in particular institutions which are constituted by accounting rules and routines? These questions revolve around the role of individual behaviour in institutional change, a topic that the OIE inspired literature on management accounting change has largely ignored. Therefore, to be able to explore accounting changes at the Rabobank through an OIE perspective, we need to develop a framework that is in line with the ideas of Barley & Tolbert (1997) and Burns & Scapens (2000) on the one hand, but offers a more detailed perspective on how institutions change, and how this change affects the individual and his social group.

This chapter will propose a theoretical framework, which addresses some of the blank spots in the applications of the ideas coined by OIE theorists. It will focus on the way in which human agency is possible in institutions. The framework envisaged here offers a micro perspective on the institutionalisation of practice and the processes that actors face when these institutionalised practices are challenged. It will provide an explanation for the process of interaction between individual action and collective social structures, such as institutions and it attempts to bridge the two. It also looks into the disruptions of routines and the anxiety that can result. It will explore the qualities of routines that make them supposedly resistant to change. The goal will be to explore the *process* of institutional change.

The role of routines in processes of management accounting change have been explicated in the framework of Burns and Scapens (2000), in which they explain that action through the reproduction and adaptation of rules (the formalised working procedures) and routines (working procedures-in-use) influence institutional change. However, it is not clear how routines change in the first place. An issue that was subsequently addressed by Busco *et al.*(2000), who described the take-over of an Italian company by the American corporation

General Electric. They observed that this take-over induced a 'shock' that could cancel out the ontological security that individuals strive for, and that could allow for an 'unfreezing' of formal and informal agreed rules of behaviour. This is not disputed in this work, but following this line of argument would needlessly limit the reader to assuming that nothing short of a shock would be able to effectively implement management accounting change. It would not leave much room to explore change that occurs without explicit disruption of existing arrangements. In other words, it is left unclear why it is that some successful implementations are relatively harmonious, in the absence of crisis, while others stir up the organisation, as routines display their resistant nature towards change, necessitating the 'unfreezing' of routines through an introduction of a shock. To devise a framework that identifies the possible routes of institutional change on a micro-level, the chapter is structured as follows. The chapter is divided in two sections: one section dealing with stability in organisations and one dealing with change in organisations.

Although one can argue that stability is a concept that has meaning only relative to change, the first section serves to explain the inherent stability of coordinated organisational action. The chapter starts from the premises that stability is not the absence of change, but the presence of regularities. This warrants an explicit theoretical treatise on organisational stability. The section explains how decision-making by rule following aids organisational stability. I will argue that organisational decision-making processes are inherently stable as they are mostly driven by relatively inarticulate processing mechanisms: the script. Then the following section will demonstrate that routines themselves are not specifically resistant to change, unless they are accompanied by scripts that are. I will take the position that routines are the behavioural expressions that may point to cognitive scripts and schemas. It is this that validates the strong emphasis on cognitive structures in this work. The section will demonstrate the effects of employing scripts, using the candid overview by Gioia of the events at Ford during the Pinto crisis. The text to that point rephrases the main questions. Instead of asking: how does institutional change proceed in organisations, it becomes: if cognitive structures cause individuals to display some degree of stability in their decision characteristics, under what conditions are people induced to reconsider these structures, and what affects their new form?

The second section will address these questions. The section starts by categorising the concept of change into first order change and second order change, as proposed by Bartunek & Moch (1987) and Nielsen & Bartunek (1996). It will argue that it is especially important to explore how individuals select and invent new scripts. To do so, I have adapted a framework of Louis (1980), who noted that a breakdown of cognitive scripts culminates in a sense making effort. It is this sense making effort that is triggered by the inability of existing cognitive structures to deal with novel events. Sense making then leads to new scripts, better adept at dealing with similar classes of experiences as the one that triggered its conception. Sense making thus leads to new meanings being given to experience, on which repeated action (i.e. routines) can be based.

The chapter will propose a framework that explains how institutional change emerges within social groups, from the perspective of the individual as participant in these social groups. This framework will be used for the enquiry at the Rabobank.

3.2 Stability in Organisations

3.2.1 Decisions as rule following

Several authors have recognised two possible categories of decision-making processes (March, 1994; Levitt & March, 1996). These two categories confront two possible views of decisions for choice: the economically rational[1] decision and rule-following behaviour. As chapter 2 discussed, the first view on decisions assumes that the decision maker engages in intendedly rational calculation. Decisions are based on an evaluation of alternatives in terms of their consequences for preferences. Rational- or intended rational choice is an activity of defining preferences, assessing alternatives and their consequences and selecting that alternative that matches the consequences which are close to predefined preferences. For example, strategic decisions have been presupposed to be a rational-comprehensive process (Wooldridge & Floyd, 1990) that can yield optimal solutions. Assumptions on the rational nature of decision-making processes have had their share of criticism. 'The neglect of context and the role of powerful groups within it has produced a situation in which myths abound about rational problem solving processes and linear implementation' (Pettigrew *et al.*, 1992, p. 7).

The second view replaces the logic of consequence by the logic of appropriateness, in which actions are matched to situations by means of rules that are appropriate for such situations. The guiding principle is then no longer the ability to select an alternative based on its perceived utility, but rather to select the proper alternative while following a certain decision rule appropriate for certain situations and for certain roles that one can play. March illustrates the distinction between the logic of appropriateness and the logic of consequentiality by the following table:

[1] The word 'rational' here may seem misleading. It may imply that rule following is not rational. This is not suggested here. Rule following may be the most rational thing to do for an individual who lacks sufficient information processing capabilities.

Anticipatory action (logic of consequentiality)	Obligatory action (logic of appropriateness)
1. What are my alternatives?	1. What kind of situation is this?
2. What are my values?	2. Who am I?
3. What are the consequences of my alternatives for my values?	3. How appropriate are different actions for me in this situation?
4. Choose the best alternative that has the best consequences.	4. Do what is most appropriate.

Table 3-1: Anticipatory action vs. Obligatory action

Rule following in choice is supported by Zucker (1991, p. 85), who notes: 'when acts have ready-made accounts (Garfinkel, 1967), they are institutionalised, that is they are both objective and exterior. (…) While these accounts are socially created, they function as objective rules because their social origin is ignored (Schutz, 1962). At the same time, ready-made accounts define the possible–institutionalisation makes clear what is rational in an objective sense'. Rules as noted by March are often institutionalised, but not necessarily so. For example, a 'trendsetter' type of person is labelled as such more by the absence of institutionalised rules of behaviour, rather than because of their presence. Rule following in choosing is considered important by a number of authors including DiMaggio & Powell (1991), Greenwood & Hinings (1996), March & Simon (1958), and March (1989a; 1989b). But different schools of thought take rules to be so obvious, that they are not explored in their own right, but rather as a context for behaviour. For example, DiMaggio & Powell (1991), as representatives of NIS theorists, have presented the theme of legitimation towards the outside world. Rule following then implies legitimised behaviour.

Rule following in action choice is a complex starting point for analysis. It involves the definition of appropriate rules for varying situations. The next paragraph will address roles, which can be considered desired and expected behaviours by others and identity as an expression of how we see ourselves. The section will argue that roles and identity, combined with rules of proper behaviour, are intrinsically linked. Its purpose is to demonstrate the inherently stable nature of choice by rule following (cf. Leblebici & Salancik, 1982).

3.2.2 Roles, Rules and Identity

Identity involves the definition of one's role within the organisation and ones sense of self (March, 1994). Identity is the linking pin between the individual actor and his roles and associated rules of behaviour. It is important to note that the formal rules of conduct are associated with roles and not with individuals. Individuals are only bound by rules of proper behaviour through the influence of roles on their identity. Weber has discussed the

notion of roles and their implications for behaviour, although he refers primarily to the occupation of an office, which in itself is compatible with a role in March's terms. March (1989a, p. 23) argues that: 'rules define relationships among roles in terms of what an incumbent of one role owes to incumbents of other roles. The terminology is one of duties and obligations rather than anticipatory, consequential decision making'.

Identity and role are linked through motivated action. Identity is important in explaining motivated behaviour and the sense that this behaviour makes (Dutton *et al.*, 1994). Zijderveld (1973) observes that motivated behaviour results from the fact that situations are defined in terms of action and possible results of these actions. He finds that purposeful and motivated action is therefore more an attitude than anything else. It is a special attitude in the sense that it involves the matching of the identity of the actor with the definition of the situation. Role is the manifestation of an actors presumed course of action and attitude that is expected by others in the group. Zijderveld uses an example to illustrate this definition of a role. He notes that when two randomly chosen groups of people pooled in soccer teams are asked to kick a ball, not much result can be expected. Behaviour remains unmotivated, because the actors cannot identify with the role of 'soccer player'. The roles remain empty shells, because of the inability of actors to see themselves or the team members as soccer players. Once one contrasts this with the play of two professional soccer teams, one would observe clear roles, definitions and motivations. Players are more motivated as they identify with the role of soccer player. 'Their roles are…filled, if it were, with identity: I belong in club A and I am a left-back' (Zijderveld, 1973, p. 134). This example focuses on a condition for motivated action: a match between identity (as an expression on how one sees ones self and how others see ones self) and role (how others expect one to behave in a certain setting).

Identity and ego-identity are subjective notions of who we are and how we are seen. Roles are notions of what we are *supposed* to do and be in certain social settings. We all have multiple roles and they are contingent upon the social setting we find ourselves in as well as the choices we have made about the roles we wish to fulfil. Motivated action is possible when actors are able to align identity and roles, to the extent that the role is internalised by the actor. Rules follow from roles. They are the procedures and decision rules that are associated with specific roles. As such, rules are the behavioural patters that follow from the occupation of roles. From this line of argument, it follows that the actual behaviours of actors are influenced not only by the role under which the decisions are taken, but also by the identity of the actor and the degree of alignment of role and identity. Moreover, the alignment of identity and role is an important condition in the propensity to act according to the rules common in the social circle in which we move. It can be depicted graphically as follows:

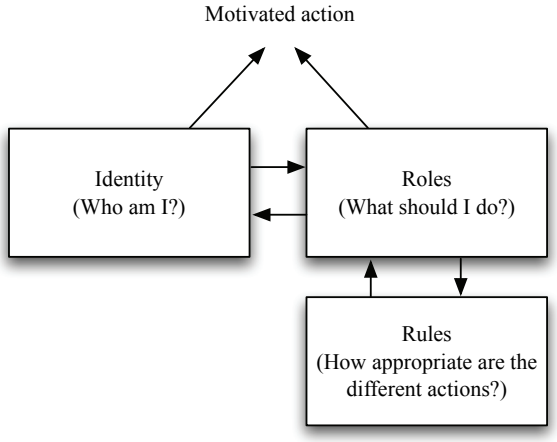

Figure 3-1: Identity and roles in rule following

From the perspective of rule driven decision-making, March (1994) noted that first an assessment is made on the type of situation. Based on the outcome, an individual usually knows which role to play. A range of possible action choices, i.e. the rules of proper behaviour, feeds the role patterns. However, limited purposeful action can occur, without the inclusion of identity. This was observed by March who incorporates the question 'who am I?' in decision-making based on rules, as well as Zijderveld (1973) who observes that motivated action needs an alignment of identity and role. The following paragraphs will argue that this view of decisions implies that decision patterns are inherently stable.

Rule based decision-making can be learned. For example: 'The management of the office follows general rules, which are more or less stable, more or less exhaustive, and which can be learned. Knowledge of these rules represents a special technical expertise, which the officials possess. It involves jurisprudence, administrative or business management' (Weber, 1968, p. 958). From the perspective of rule-driven decision making, decisions display certain regularity. In a fixed setting, the actor learns the requirements of the group of which he is part and possibly of other participants. These requirements can be seen as the role of the actor. It is the role that an individual fulfils that sets the standard of 'rational' behaviour in his/her circumstances. The better the role suits the identity of the actor, the more he is capable of motivated behaviour. Foote has eloquently explicated the regularities that are implied in behaviours: 'The regularities in our behavior toward (someone else) are necessarily based upon our expectation of regularities in his behavior. The regularities in his behavior toward us are in turn based in the same way upon his sharing our conception of his identity and his expectation that we share his conception of our identity. Naturally there is many a slip (1972, p. 348)' (quoted by Zijderveld, 1973).

The above shows that stability is at the core of rule-based decision-making. It is very much concerned with identity and the roles of others and ourselves. Motivated behaviour requires a match between role and identity. Furthermore, the reason for motivated action is dependent upon the interaction with the setting. Roles and identities are linked to others in the group or *role-set*, and the interaction between individuals is based on mutual understandings of identity. Consequently, decision patterns are stable, because of these mutual understandings *and* expectations of what the role incumbent is supposed to do. These understandings and expected consequences of various actions are embedded in a social feature that allows individuals to simplify and classify their environment: the cognitive script. This thesis will argue that the script serves as the individual counterpart of routines.

Therefore, the next section will address routines and cognitive scripts, and the manner in which they tie in together. In the context of this study, it is necessary to address the cognitive script; as such scripts embody the regularity in much of our actions. In order to explore what is needed for change, one first needs to focus on the conditions of stability. Stability can often be observed by the presence of routines. The next part will address cognitive scripts and routines as the primary vehicles of stability in human (inter)action.

3.2.3 Scripts and Routines

3.2.3.1 Cognitive scripts

Louis (1980) noted that relatively inarticulate cognitive scripts, which are coherent sequences of events expected by the individual, drive most behaviour. Taylor and Fiske (1978) asserted that most of our every day decisions are made 'off the top of our heads'. The scripts underlying these decisions are reviewed only when the individual senses 'something out of the ordinary'. A cognitive script is a conceptual structure that allows individuals to approach familiar events in a relatively similar fashion. More specifically, Choo (1996) noted that 'a cognitive script is a sequence of actions and events in an individual's knowledge structure that enables that individual to understand a specific situation or context *and* guides his or her behavior in that situation or context' (p. 339). Edwards (1994) notes that scripts are generalised event schemes, which are derived from concrete experience of events and thus represent 'how the world works' (p. 211). Cognitive scripts are a category of *schemas*, which entail scripts, and also plans, categories, implicit theories, prototypes and heuristics (Wofford, 1994, p. 181). Schemas are knowledge structures in memory that people use to understand their environment, handle problems, and form expectations on results. A script is then 'a cognitive memory structure consisting of the objects, events, roles, conditions, sentiments, and outcomes that occur in a sequential pattern in familiar tasks and situations (Wofford, 1994, p. 181). Nooteboom (2000) visualises scripts as a set of events, or *nodes,* which produce outcomes

that are then introduced in the next node of the script or nodes outside the current script. A simplified version of the visualisation that he presents is provided in Figure 3-2:

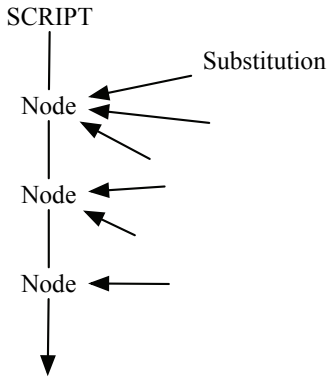

Figure 3-2: Visualisation of scripts (simplified version of figure taken from Nooteboom, 2000, p. 126)

Nooteboom (2000) describes scripts as 'one's cognitive, categorical framework or absorptive capacity' (p. 126). He argues that scripts can be seen as series of nodes, which correspond to sets of events or actions. These events or actions can be 'substituted' into the nodes, and thus become part of the script. Nooteboom further argues that nodes produce outcomes that can then be substituted in subsequent nodes. It is also possible that outcomes of a particular node are substituted into nodes of different scripts, or in no other script at all. Nooteboom's view is relevant to this thesis as it emphasis that actions can be invoked 'automatically', if they result from the substitution of outcomes of earlier nodes.

Shank & Abelson (1977) and Gioia & Poole (1984) regard scripts as cognitive representations of rule-guided, stereotypical sequences of events and actions. They point to the fact that a script contains knowledge on sets of events or behaviours (weak scripts according to Gioia & Poole, 1984) and their sequence (strong scripts; Gioia & Poole, 1984, p. 449). Shank & Abelson (1977) treat scripts primarily as cognitive phenomena, contrary to Barley & Tolbert (1997), who propose that scripts are 'observable, recurrent activities and patterns of interaction characteristic of a particular setting' (p. 98). They focus more on the actions that are embodied in the scripts. Gioia & Poole (1984) provide a definition that focuses both on the mental storage of scripts (the cognitive component) and on the resulting behavioural regularities. They define a 'script' as 'a schema held in memory that describes events or behaviours (or sequences of events or behaviours) appropriate for a particular context' (p. 450). This definition fits the description of decision making as rule following from the last section. Moreover, Gioia & Poole discuss the notion of 'scripts' instead of 'cognitive scripts'. In doing so, they emphasise the

sequence of events or behaviours, instead of their cognitive representations. Although these are practically difficult to separate, this thesis focuses theoretically on 'scripts', to underscore the idea that scripts can be more than cognitive structures. They can be part of habitual action in a very real manner, just as Barley & Tolbert (1997) propose. However, it cannot dismiss the associated cognitive phenomena, as these cause specific behavioural regularities to be displayed. Knowledge on how and when scripts are invoked, and when they are not, is needed to provide explanations of changes in repeated behaviours.

The definition of scripts that is used in this thesis accommodates processes of cognitive adaptation that individuals can experience when confronted with novel situations. These cognitive processes include the processes that lead to 'automatic' script performance or conversely, cognitively controlled processing of situational information. This is in line with Gioa & Poole (1984), who write: 'scripted organisational behaviour is often performed unconsciously…, although active cognition is involved during the process of script development and when encountering unconventional situations' (p. 449). As such, the associated cognitive dimension is an important part of this thesis, although primarily related to the invoking or dismissing of scripts as well as the 'invention' of new scripts. Therefore, this chapter presents a slightly adapted definition of a script: 'a regularly performed schema held in memory that describes events or behaviours (or sequences of events or behaviours) appropriate for a particular context'. This definition focuses not only on its cognitive representation, but also on the regular performance of the schema, producing potential behavioural regularities, that can result in the production of routines, as the next section will argue.

3.2.3.2 Routines

It appears that a number of authors employ the term routine in the same manner as others employ the term script. In this work, routines are collective, observable behavioural regularities, whereas scripts are the underlying individual cognitive regularities that may- or may not accompany routine behaviour. This section will explain why it is important to focus on scripts, while we are primarily interested in the workings of routines and their effect on the propensity to change[1]. It will illustrate the role of scripts in the propensity of individuals to consciously or unconsciously select behavioural responses from their repertoire in any type of situation. With regards to change processes and the presumed resistance to change that people display, scripts are the individual cognitive counterparts of routines. It thereby legitimises the strong emphasis on scripts. Finally, it will expand on how sub-optimality can arise in decision-making. It is this well-known quality that can be very well illustrated using the cognitive script approach.

[1] The reader may recall from chapter 2 that Burns & Scapens (2000) argue that routines are important for institutional change.

Similar to scripts, routines allow actors to make complex decisions, without resorting to extensive search behaviour for alternatives and preferences. Their value lies in the reduction of the 'complexity of real-world decisions to manageable levels by limiting the scope of the "problemistic search" for solutions' (Sharp, 1994). Nelson and Winter (1982) argue that routines reduce decision complexity by providing a narrow range of environmental signals (cues) that indicate possible causes for action (see also March & Simon, 1958). The price that one has to pay for increased simplicity is that actors do not oversee all possible alternatives, but only parts thereof. Stein (1997) notes that the cognitive processes of reduction and elaboration can lead to choice biases, as well as influencing the sensory inputs we give attention to and those we do not. Giddens (1984) sees routines as the very fabric of social structure. Structure exists because of the continuous production and reproduction of action. Yet, at the same time, routines enable the continuity of the personality of the agent. In different terms: routinisation enables structure as well as personality of those operating under the influence of structure.

Sharp (1994) suggests that routines can be seen as Standard Operating Procedures (SOP's) that facilitate decision making in the face of complexity and uncertainty. In this, he makes no distinction between formal routines and factual routines. Burns & Scapens (2000) and Cohen & Bacdayan (1994) do make this distinction. They perceive routines to be the informal counterpart of formal rules of behaviour. They separate Standard Operating Procedures from routines-in-use. From their perspective, rules are the formalised statement of procedures, whereas routines are the procedures actually in use (Burns & Scapens, 2000, p. 7). A somewhat different concept of routine behaviour is provided by Louis (1980). She observes that in normal every day action, individuals operate in 'a kind of loosely preprogrammed, nonconscious way, guided by cognitive scripts' (p. 239). She suggests that conscious thought does not play a major part in these activities. Porac *et al.* note that 'many experienced employees perform their work with highly routinised behavioural patterns and thus may not engage in much causal reasoning simply because work has become "scripted"' (1983, p. 286). These writers refer to scripts, but related notions have also been used, including schema (Weick, 1979) and habitualization (Berger & Luckmann, 1979). These concepts are more individually oriented than the concept of routines noted above.

Most authors agree on the persistence of routines even in situations where they yield sub-optimal or even adverse results. Because of the relative ease with which routines are available, they can be invoked in situations when this type of response may not be warranted (Nelson & Winter, 1982; Cohen & Bacdayan, 1994; Cohen, 1996; Sharp, 1994). Cohen (1996) makes this point when referring to laboratory studies on the subject: 'In the laboratory, subjects can often be induced to form routines for tasks so that they will miss "obvious" opportunities for improved performance (i.e., they make the equivalent of three right turns when they could have made one left)' (p. 192). But there exists some confusion with regards to the ability of routines to change. For example, Feldman (2000) argues that routines have a very real potential for change. She illustrates

by referring to an extensive case study at an organisation that manages student dormitories. She shows that working routines can and do change from one iteration to another. It is this position that does not fit common knowledge.

This points us to a distinction that appears to be relevant: routines resulting from the collective performance of a script, vs. the conscious and collective repetition of action. Stinchcombe's (1990) notion of routines illustrates the latter: 'a skilled person becoming really expert and fast at doing some number of distinct tasks'. Stinchcombe recognises that the skill of skilled workers is only in part attributable to action routines. In part, the skill of skilled workers is also dependent on 'the many principles of decision which tell workers when to use one routine, when to use another' (1990, p. 33). Implicitly, Stinchcombe distinguishes between (action) routines and scripts on the same basis: the motor skills of acting and the cognitive skills of deciding[1]. March (1989a) on the other hand, observes that routines can be related to rules. Rules in themselves are not routines, as there are multiplicities of rules applicable to each situation. Rather, the process causing some rules to be evoked more than others point to routines can occur due to the performance of scripts. According to March, routines embody collective and individual identities, interests, values and worldviews. These are used on a regular basis to deal with potential problems.

Feldman points to a feature that is explicated by distinguishing between scripts, and action routines or skills. That is that scripts do not necessarily accompany action routines. Feldman (2000) observes that yearly routine activities do change from one iteration to the next. The routines she discussed consisted of yearly activities of which the result was aimed to be the same over the years (i.e. yearly move-in in dormitories; the yearly hiring and training of student personnel). She explicated that each yearly routine was preceded by the extensive reflection on the result of last years' iteration. Feldman (2000) observed that routines were especially susceptible to change when the intended outcome was not achieved, or the outcome was unintended and undesirable, or outcome produced new possibilities, or the outcomes fell short of ideals. In any case, extensive reflection occurred retrospectively on the outcome of each iteration. In other words, scripts did not lead 'automatically' to the invoking of the yearly routines. Rather, routines were accompanied by retrospective sense making. Scripted decision-making may have been at the basis of the actions that were to follow, but they also instigated a yearly review of last years results and subsequent adaptation of routine behaviour. The selection of a course of action was not uniquely determined by following scripted knowledge.

It follows that routines can be susceptible to change as long as they are accompanied by some degree of reflection, in terms of its applicability to circumstances and considerations of possible refinements. This is not possible when unconscious scripts invoke routines, to

[1] Although Stinchcombe implicitly recognises the distinction; he focuses primarily on routine tasks within an organisational setting, as does Feldman.

the extent that no consideration is given to different environmental conditions. Scripts can trigger the relative automatic *selection* of a course of action (or in Stinchcombe's terms: the selection of one of many sets of skills to invoke), without extensive reflection. The presence of scripts can lead to the selection of sub-optimal action routines that may or may not be appropriate to the situation. Contrary to the case described by Feldman (2000), no extensive judgement is then being made on the usefulness of each action routine and possible methods of improvement.

The focus on scripts serves to accommodate the possibility that action routines can change, but only if they are reflected upon. Therefore, one conclusion is that action routines may be so persistent, because they are accompanied by cognitive scripts that prevent them from being assessed in relation to the situation in which they are employed. Instead of saying that routines are resistant to change, it is more accurate to note that 'unconsciously' invoked repeated actions are more resistant to change than consciously invoked repeated actions, such as those described by Feldman (2000). Put differently, scripted action (actions resulting from the performance of scripts) does not require actions to be brought to a reflective level. The mindless and repeated performance of these scripts thus results in repeated actions that are not consciously evaluated for their appropriateness. Even consciously invoked scripts ('I am going to get some money from the Automatic Teller Machine') can involve unconscious actions, as parts (or nodes, in Nooteboom's, 2000 terms; see p. 40 of this chapter) of the script are invoked as outcome of earlier nodes. This results in the proposition that the performance of scripts can result in the 'mindless' execution of actions and routines. But, as Feldman (2000, 2003) argued, routines can also be susceptible to change, when they involve a degree of reflectiveness. This means that these routines are not fully governed by scripts, but by a level of conscious cognitive processing.

Scripts as guiding and regular principles of behaviour open the door for the motivation of the occasional sub-optimality in decision-making noticed by Simon. Gioia & Poole (1984) note that 'the recall of events for a similar or prototypic situation provides the decision maker with the script for understanding and predicting the outcome of the decision. Scripted decision making, therefore, is efficient decision making, but not necessarily good decision making. Scripts are heuristic knowledge structures that aid in reducing the cognitive complexity of decision making. However, the scripting of decision situations has an obvious drawback: it can induce a failure to be aware of the fine-grained differences that distinguish a current decision problem. … This is because the process of deciding is based on a protoscript, rather than a step-by-step accounting of the uniqueness of events relevant to the present situation' (p. 454). The implied regularity of script based decision-making, leads to occasional sub-optimality. Moreover, Harris (1994) proposes that the schema-directed[1] nature of the perceptual process 'lessens the frequency with which schema inconsistent information is discovered and made conscious. The very

[1] Scripts are a category of schemas.

nature of schemas act to ensure that drastic challenges to their validity seldom arise.' (p. 311). This is because new knowledge is usually fitted into existing schemas. It implies that new knowledge is formulated in terms of old schemas, and therefore helps to sustain these schemas, and this reduces greatly the odds that this knowledge will challenge existing schemas.

The relation between scripts and routines are depicted in Figure 3-3:

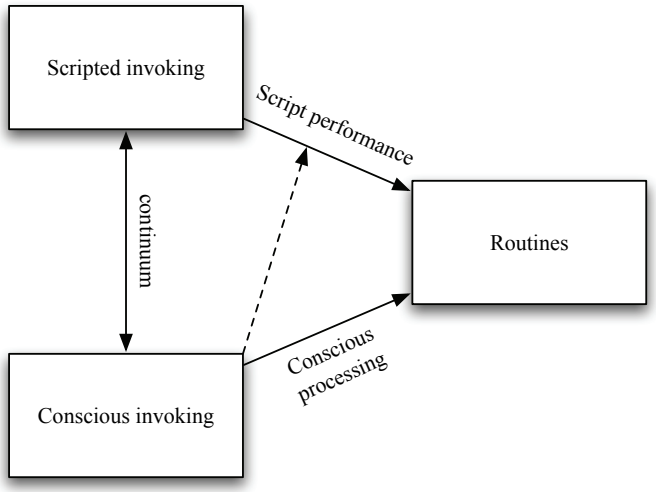

Figure 3-3: Relation between scripts and routines

Figure 3-3 shows a continuum that ranges between conscious invoking of routines and the scripted invoking of routines. It is depicted as a continuum, as routines are never fully automatically invoked or fully conscious. Rather, invoking can be more scripted or more conscious. It is a matter of degree, not absolute. The figure shows that actions and events can be invoked as a consequence of the performance of scripts (which does not require a reflective level). This constitutes scripted invoking of actions. Alternatively, actions and events can also result from a high degree of purposeful and conscious consideration (conscious invoking). The conscious and deliberate choice for actions does not mean that all separate actions involve the same degree of reflectiveness. A course of action can be decided for quite deliberately, while parts of the actions themselves are performed rather mindlessly (e.g. the choice to obtain money from an Automatic Teller Machine can be a conscious one, yet the various steps: entering card, entering PIN code, selecting amount and receipt, can all be invoked rather mindlessly). The selection of a script itself may occur consciously, while the various elements that form the script (see the discussion on nodes on page 40) can invoke action on a more subconscious level. Gioia & Poole (1984, p. 454) note: 'Organisation members know the appropriate patterns of behaviour for many

situations. They consciously choose to perform these patterns, although the patterns themselves might be well learned and predominantly unconscious'. This idea is reflected in Figure 3-3 by the dotted arrow pointing from "conscious invoking" to "script performance"

This section has identified a number of properties of scripts and routines that are in part definitional by nature. Firstly, routines are the counterpart of formal procedures. They are collective repetitive actions that are not necessarily formalised. Secondly, scripts can invoke routine actions, or routines can result from repeated conscious cognitive processing of situational information. Only routine actions accompanied by scripts that prevent the assessment of appropriateness may qualify as 'resistant to change'. Therefore, related to the effects of accounting change on individual actors, it may be more productive to address scripts than routines as we are foremost interested in the source of change and stability. The regularity implied in the presented view of decision-making may lead to sub-optimality as scripts can be applied to situations where they are not wholly suitable, but leave this sub-optimality unobserved. Furthermore, as new information is processed in terms of existing schemas, existing schemas are seldom challenged by new information itself.

3.2.4 Scripts enabling and *constraining sense making*

As noted in the previous section, schemas and scripts are alike in many respects. A script is a schema, but opposite is not necessarily true. A script is a category of schemas. Nevertheless, the two are often used to indicate the same phenomenon: a schematic knowledge structure held in memory that specifies behaviour or event sequences that are appropriate for specific situations. However, the element that differentiates the script from the schema is that the former is primarily concerned with the individual's behavioural repertoire (Gioia & Poole, 1984, p. 450). Therefore, the attention of this work is aimed at the script. But since the script is a subcategory of schemata, properties of the latter will hold for the former.

Gioia & Poole note that scripts serve as sense making devices. They help actors cope with familiar situations. They provide dual benefits: they facilitate understanding of a situation and they provide a guide for behaviour. However, there are differences of opinion regarding the precise role of sense making. Louis (1980) argues that a script *is the result of sense making* in that the script provides understanding of a situation, while Gioia & Poole (1984) argue that a script is *a means of sense making*, in that people make sense through the use of scripts.

Gioia & Poole focus on the act of sense making under conditions of stability. In their view, scripts serve as sense making devices, in that they guide the interpretation of events. These events are perceived in terms of existing schemas. Therefore, they do not perceive

the act of sense making as a necessarily active and conscious process. Rather, it is the interpretation of the environment through the use of scripts. Louis, however, notes that, under conditions of instability, the process of sense making contributes to the creation of more encompassing scripts. This notion of sense making constitutes the conscious and active efforts of an actor to make sense of the world around him, when he comes to the realisation that currents scripts are insufficient to deal with new experiences. Louis therefore argues that people can devise new actions through the concept of sense making. These actions can ultimately become scripted, but not necessarily so. It is a view that is supported by authors such as Abelson (1976, 1981) and Schank and Abelson (1977). In these works scripts are depicted as essentially automatic in nature and sense making is the conscious processing of situational information.

This thesis adopts the view of Louis (1980). It argues that sense making is a conscious activity to interpret experiences, when scripts are not available or incapable to deal these (often) new experiences. This will be explained further in section 3.3 below, the part of this chapter that covers change. The current part of this chapter discusses stability, which means that existing scripts guide many actions. Sense makings does not play a major role in these circumstances, as people are not triggered to consciously question the scripts that guide their behaviour.

Scripts come in two basic sorts: weak scripts and strong scripts (Abelson, 1981). A weak script relates to other forms of cognitive structures such as person prototypes and serves mainly to form and to organise expectations concerning the behaviour of others. However, these do not specify the sequence of this behaviour. Strong scripts contain not only expectations of the occurrence of events, but also their progressive sequence. Strong scripts are mainly related to stereotypical and ritualistic events.

By now, it is clear that the view I present here implies that individuals can select their actions from numerous possible responses. This process of action selection can range from relatively mindless selection through the performance of strong protoscripts, which hold knowledge on actions and the expected sequence of events that should follow, to the invention of new scripts to deal with un-encountered events. Goia & Poole (1984) observe that developing and invoking of scripts occurs to many different degrees. It depends on the typicality of a situation. They have depicted this insight in Figure 3-4:

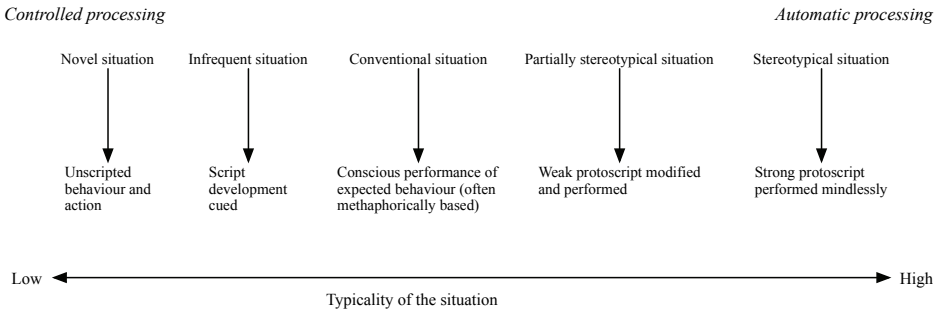

Figure 3-4: A continuum of script development (Gioia & Poole, 1984)

According to Figure 3-4, a novel situation does not necessarily lead to script development by individuals. When the situation is unlikely to recur, the individual will deal with it without triggering script development. However, when a situation is infrequent, but is perceived likely to occur again, the individual may be triggered into script development. Then, the more typical the situation, the more scripts the individual has to his disposal to deal with it without resorting to extensive search behaviour and the more automatic the processing of scripts is likely to be; and therefore, the more automatic the selection of different sets of behaviours will be.

The left side of the above continuum is about situations in which existing scripts are perceived as incomplete to resolve the issues at hand. These are situations that are at the core of change. For, the realisation that existing arrangements are incomplete is a first step to change. Schein (1985) referred to this stage as the unfreezing of existing arrangements. In these circumstances, sense making refers to the fabrication of new cognitive structures, to allow the actor to deal with a new experience. This will be the topic of later sections of this chapter, in which a conceptualisation will be offered of sense making of newly encountered experience.

This work deals with two explicit events: the situation of stability, that is the situations depicted to the right of the continuum in Figure 3-4. It is the situation in which automatic script processing occurs. Automatic script processing is the property that can cause resistance to change. Whether these scripts are invoked, depends on the presence of cues for their performance. The next section will illustrate the inherent dysfunctional properties of scripted decision making, by referring to Gioia's review of the events surrounding the infamous Ford Pinto crisis. Then a case will be made for the inherent stability of organisational life, by arguing that much action can be attributed to the automatic processing of scripted knowledge. And finally, a framework will be proposed of actions that are performed in a relatively 'automatic' fashion. This 'automatic' performance is due to the presence of cognitive structures such as scripts and schemas.

As noted above, first a case will be made for the workings of scripts. I will illustrate the workings of scripts by referring to the Pinto case, which Gioia was closely involved in. Its purpose is to illustrate how scripts can affect human decision-making. Especially interesting in the case is how individuals use management accounting information as cues that serve to invoke scripted knowledge.

3.2.5 The dysfunctional properties of persisting scripts

So far, I have argued that scripts can be held accountable for the consistent manner in which people deal with different events. They provide individuals with clues on how to behave in a manner that does not warrant extensive information processing. They guide behaviour according to present paths. To illustrate some of the consequences that this can have I will briefly review Gioia (1992), who analyses his own role in the Pinto fires crisis[1] that has haunted the Ford motor company for many years.

In his remarkably candid review of the events leading to the ultimate abandoning of the Pinto model by Ford, Gioia used script analysis to explore his own role as Ford's Field Recall Coordinator, a position in which he was responsible for recommending recall schemes for automobiles that were showing defects. The consequences of these defects could range from minor damage to the cars, to life threatening situations, as was the case with the Pinto model. In his analysis Gioia focuses more on what he did *not* think about and act upon, than what he decided and what he did do. The problem came first to his attention when a few reports of collision fires came in, but *'was there a problem? Not as far as I was concerned. My cue for labelling a case as a problem either required high frequencies of occurrence or directly traceable causes. I had little time for speculative contemplation on potential problems that did not fit a pattern that suggested known courses of action leading to a possible recall. I do, however, remember being disquieted by a field report accompanied by graphic detailed photos of the remains of a burned-out Pinto in which several people had died. Although that report became part of my file, I did not flag it as any special case'* (pp. 381-382).

At this stage, the field information did not fit the known properties of what constituted a 'problem'. Also, Gioia was not induced to evaluate his conception of 'problem'; i.e. there was no ground to doubt the tacit assumptions forming the very fundamentals of his actions. As argued by Louis (1980), surprise in its broadest form is needed to engage in the act of sense making that is to start to contemplate on the appropriateness of scripts-in-use. The trigger that served as this surprise was the sight of burned car at a Ford depot.

[1] The Ford Pinto was a compact car that was marketed in the 1970's. It had major design flaws that caused it to incinerate following relatively minor low-speed collisions. Ford's reluctance to recall all vehicles, even in the face of overwhelming (with hindsight, that is) evidence caused Ford to be the first corporation ever to be indicted for *criminal behaviour*, called reckless homicide.

'*The revulsion on seeing this incinerated hulk was immediate and profound. Soon afterwards, and despite the fact that the file was very sparse, I recommended the Pinto case for preliminary departmental review concerning possible recall. After the usual round of discussion about criteria and justification for recall, everyone voted against recommending recall - including me. It did not fit the pattern of recallable standards; the evidence was not overwhelming that the car was defective in some way, so the case was actually fairly straightforward'* (p. 382). Gioia argues that the requirements of the job-role supersedes emotions: *'I would argue that for organisational members trained to control emotions to perform the job role, emotion is either not a part of the internalised script, or at best becomes a difficult-to-access part of any script for job performance'* (p. 386). With this, he illustrates that even emotional surprise does not guarantee the opening up of scripts for evaluation, because of the sometimes-rationalised business practices. It is this feature that was prominent in Weber's work, where he proposed that the rationalisation of society and of the workplace, would put demands on how actions would be motivated.

It was not until the National Highway Traffic Safety Association (NHTSA) issued a formal determination that the Pinto was defective, that the model was recalled. One could argue that the evidence provided by the NHTSA, a federal agency, had sufficient credibility or possibility of enforcement, that it either appealed to scripted knowledge of what to do, or that it succeeded in opening up existing scripts, making more conscious evaluation of the case possible. Gioia does not state which is true.

During his period at Ford, Gioia (1992) did not recommend recall at all. Later on he wondered why he did not see the gravity of the problem (p. 383). He offers as an explanation in his central thesis: '*My own schematised (scripted) knowledge influenced me to perceive recall issues in terms of the prevailing decision environment and to unconsciously overlook key features of the Pinto case, mainly because they did not fit an existing script. Although the outcomes of the case carry retrospectively obvious ethical overtones, the schemas driving my perceptions and actions precluded consideration of the issues in ethical terms because the scripts did not include ethical dimensions.'* (p. 385).

Goia was socialised into the culture of Ford, and this had its impact on his decisions. Interestingly, he does not argue that he presented his decisions in certain terms to increase legitimacy or increase chances of acceptance as is argued sometimes by institutionalists (e.g. DiMaggio & Powell, 1991) but he fully internalised the criteria, thereby missing what were, retrospectively, obvious pointers to what was to become a disastrous affair for Pinto drivers, as well as for the Ford motor company. He notes that *'organisational culture, in one very powerful sense, amounts to a collection of scripts writ large. Did I sell out? No. Were my cognitive structures altered by salient experience? Without question'* (p. 387). The retrospective nature of the analysis becomes clear in what I see as the core of his experience at Ford: *'Before I went to Ford, I would have argued strongly that Ford had an ethical obligation to recall. After I left Ford I now argue and teach that Ford had an ethical obligation to recall. But, while I was there, I perceived no strong ethical*

overtones to the case whatsoever. It was a very straightforward decision, driven by dominant scripts for the time, place, and context' (p. 388). Harris (1994) observes that while schemas, the larger structure of which scripts are part, can facilitate complex decision making, they can also blind the decision maker to features that threaten the validity of the scripts-in-use. Lorsch (1985) referred to this phenomenon as 'strategic myopia'.

This section raises the question concerning how change can occur at all in the face of persistent scripts. Before turning to this question in the next section, it is useful to distinguish between different types of change. Scapens (1994) differentiates between evolutionary change and revolutionary change. The former involves the gradual change from one state to another, without the questioning of shared concepts of meaning. The latter 'involves a significant disruption of established routines as some major crisis disrupts the truce and makes it necessary to establish new meanings through which to make sense of organisational activity' (Scapens, 1994, p. 312). This crisis has been depicted as a black box in a later paper by Busco *et al.* (2000) and could be seen as being 'given'. A different separation between categories of change has been provided by Bartunek & Moch (1987, p. 486). They offer a 3-way categorisation of organisational change. Their three categories are especially helpful to this work as they revolve around the effects on cognitive scripts.

First order change is the tacit reinforcement of present understandings. The change is consistent with existing understandings and schemas. This does not mean that scripts cannot change under first order change; however, they change in line with present understandings. For example, a stronger emphasis on participative decision-making could induce scripted action that leads to more participative decision-making. Second order change does involve a change in shared schemas. This involves the conscious change of schemas in a specific direction. As a result, scripts can change as well. The primary difference with first order change is that the underlying beliefs that can be considered one of the sources of the emergence of scripts are challenged. This is not the case for first order change. For example: when a management accounting system have been seen as scorekeeping devices for many years, and the organisation is suddenly required to use its data as inputs for decisions, then the shared concept of the management accounting system is altered. Now the meaning and the attached range of actions are changed. Associated scripts are thus changed. Third order change relates to an awareness of the schemas that are in use. It is not simply about changes in schemas and scripts, but about an increased awareness of the existence of schemas and the realisation of the fact that the use of some scripts may be sub-optimal. Third order change is thus about a heightened awareness of the core concepts of scripts and schemas. Later sections will primarily focus on first- and second order change, as the changes at the Rabobank were primarily located on these levels. As Bartunek & Moch (1987, p. 487) argue: 'Many OD interventions have been implicitly designed as first-order interventions – that is, they focus on solving problems so that established patterns can function more efficiently'. The Rabobank

wanted not only to introduce new practices, but also alter the established patterns of conduct (this will be explained in chapter 4).

The next part will address organisational stability as collective expressions of stability in behaviour. As noted earlier, stability is essentially a theoretical concept for no organisation is ever in a perfectly stable state as it naturally moves through time. Nevertheless, it is an important concept as these explorations of stability allow better insights into change.

3.2.6 Organisational stability

So far, the individual has been at the core of the argument. But this would be incomplete as it ignores the fact that social structures can be external to the individual and objectified to the extent that they present themselves as 'given' to the individual. However, it presents a classic dilemma to the present effort: what is the relation between individual choice and action, and the effect on social structure. I do not presume to provide a complete answer, but I will provide a workable solution to the issue at hand: inherent stability in actions. So far, this has been limited to individual regularities, but now this will include organisational regularities by virtue of its cultural traits.

3.2.6.1 Culture as sustaining regularities in interaction

Culture has received considerable attention over a wide time span, but few authors have addressed culture's manifestation in individual sense making efforts. The individual dynamics of organisational culture have been neglected to a certain extent. But as Louis (1985) asserts, organisational culture encompasses both individual and group level phenomena. Group level manifestations of organisational culture affect individual sense making, and individual sense making can be an expression of a culture. Therefore, organisational culture plays a dialectic role in individual behaviour as well as being the common basis for knowledge of entire groups. Van Maanen and Barley (1985) observed that 'while a group is necessary to invent and sustain culture, culture can be carried only by individuals' (p. 35).

The relevance of culture to a study on the effects of routinised and schema-based action is best described by Harris (1994) who notes: 'Organizational culture's influence on individual sense making is revealed in the operation of a patterned system of organisation-specific schemas' (p. 309). Moreover, Abrahamson & Fombrun (1992) argue that culture is the unintended result of routine interaction between networks of actors. Harris (1994) argues that culture becomes a variable within individual sense making through the mental dialogue that decision makers have with other contextually relevant individuals or groups (real or imagined; past or present). Harris focuses more on schemas than on scripts, thereby emphasising the shared nature of schemas. However, as scripts are part of the

broader category of schemas, the terms schemas and scripts are used interchangeably. Scripts refer to mental maps that enable individuals to orient themselves within their experiential terrain. Routines and the accompanying scripts sustain culture. Harris identified five types of in-organisation schemas that are relevant for individual sense making:

*Self schemas: "*Self-in-organisation" schemas refer to theories and generalisations on aspects of self in the organisational context. It includes values, roles and behaviour. Mead (1934) noted that much of what we define as 'self' is a mirror image of what we observe in the reactions of others to us. Therefore, the self can only be understood in terms of the social environment. The self is private, but cannot be conceived without the help of others. The self guides action and helps to select appropriate scripts to deal with a given problem. For example: 'an accountant who viewed herself as being honest would refer to this schema knowledge when deciding how to react to a client's request to help "cook the books"' (Harris, 1994, p. 312).

Person schemas: Person schemas in organisations refer to expectations and impressions about the traits, goals, behaviours and preferences of others. These others are manifested in the form of individuals, groups, and work roles. Harris observes that these schemas are important as they shape the reality that one is trying to understand. Thus, person schemas not only help to categorise people ('he is in management'), but they also summarise knowledge on the other's likely behaviour, and beliefs and values. In fact, they can be seen as informed guesses about the criteria (schemas) used by others. For example, related to a scripted form of organisational roles, there can be a shared meaning for what 'management' as a role-set is expected to do. Person schemas therefore categorise our social environment, and attribute expected behaviours to these categories. Harris notes that in an organisational setting, organisational leaders, peers and subordinates are influential categories on which we schematise. Busco *et al.* note that in the setting they researched, 'a massive operational and managerial revolution emerged as a result of an *internal* decision of the Board and the CEO in particular' (Busco *et al.*, 2000, p. 34, emphasis in original). The importance of senior management's involvement was also noted by Euske & Riccaboni (1999), who recognised the important role of the company CEO: 'He delineated the context and defined the changes during his term as Chief Executive Officer' (Euske & Riccaboni, 1999, p. 478). Moreover, a new CEO brought a 'redefinition of interdependencies' (Euske & Riccaboni, 1999, p. 478. This is confirmed by Fligstein's observations that change appeared to occur when 'key actors…articulated a new view of the firm's strategy' (Fligstein, 1991, p. 334) thus causing 'some form of shock'.

Greenwood & Hinings (1996, p. 1045) note that an 'appointment of a CEO with a new functional background reflected a redistribution of power dependencies'. These role groups shape individual experience as they function as role senders; that is, by their actions they send messages about the priorities and values of these groups. This makes it

easier for an individual to learn the appropriate responses. However, it remains unclear what causes individuals to give prevalence to a certain group in specific situations. In a study of the computerisation of the workplace (Prasad & Prasad, 2000), participants primarily referred to their self image and to person schemas of peers, rather than referring to management to select their course of action. Since organisational members have multiple schemas at their disposal, it is not just a matter of defining the schemas, but also a matter of selecting between them. This is the problem of equivocality vs. uncertainty noted by Weick (1995). The same holds for the other types of culturally relevant schemas that are discussed below.

Organisation schemas: These schemas are a subset of person schemas. They consist of knowledge and impressions regarding organisational groupings as entities. For example, references to 'headquarters' consist of a number of traits that are associated with a generalised idea of what headquarters is and does. More importantly, the organisation schema is somewhat detached from individual members. They do not refer to specific individuals, but only to generalised types of persons that are associated with the department.

Object/concept schemas: Object/concept schemas are about knowledge of stimuli that are not inherently social. Harris gives as examples big offices with corner windows and the meaning of concepts such as "quality" and "participation". These schemas are culturally bound as they guide the interpretation of physical and verbal cultural artefacts. In this interpretation, it is the meaning of objects and concepts that is central.

Event schemas: lastly, event schemas contain knowledge on social context, situations, encounters, and events. They describe expected event sequences and possible appropriate behaviours in those situations. In this, they serve as guides to interpretations of behavioural artefacts such as ceremonies and rituals. Therefore, apart from guiding the behaviour in these events, event schemas also help to interpret the meaning of these ceremonies and rituals.

The different types of schemas discussed here are expressions of what is ordinarily referred to as culture. However, there is one more requirement: there has to be a certain degree of similarity between the schemas employed by organisational participants. Harris (1994) observes that these schemas tend to be more or less alike, as organisational members are exposed to the same shared experience and are exposed to the same cues. Furthermore, as organisational realities are socially constructed (Berger & Luckmann, 1979), members of a group tend to compare others' reactions, in order to form an image of the reality in which they find themselves. It is widely accepted that communication plays an important role in this respect (Mead, 1934). Moreover, Salancik & Pfeffer (1978) note that the social environment 'provides a direct construction of meaning through guides to socially accepted beliefs, attitudes, and needs, and acceptable reasons for action.' (p. 227). They observe that the social environment focuses attention on specific information, which

makes the information more salient and thus provides expectations concerning proper behaviour and the consequences thereof. A last reason for the similarity of schemas held by various actors is that in the provision of cues to others, one cannot escape revealing a part of oneself. The process of receiving cues thus includes the other party's preferences and contains information on the proper manner to behave. Proper behaviour is thus communicated. In short, culturally bound schemas are schemas belonging to the five stated categories, which have similar characteristics across a social setting.

The above argument makes a strong case for the importance of sub-cultures. For, the transmission of schemas, which as a result will increase their similarity, occurs more rapidly and is more influential in intimate and small social groups that have regular social contact. Therefore, the importance of sub-culture on behaviour may supersede that of the often-celebrated organisational culture.

3.2.6.2 Structuration of organisations

Ranson, Hinings & Greenwood (1980) argue that structuration of organisational forms occurs by virtue of production and recreation of its organisational members. They argue that structuration 'is the process of generating and recreating meanings, one in which organisational members wish to secure their "provinces of meaning" (Schutz, 1967) within the very structure and working of the organisation' (pp. 4-5). The orderly production of roles and rules that constitute stability in this context comes from agreement on shared interpretative schemes. They note: 'the deep structure of schema which are taken for granted by members enables them to recognise, interpret, and negotiate even strange and unanticipated situations, and thus continuously to create and re-enact the sense and meaning of structural forms during the course of interaction. Prescribed roles, rules and authority relations are drawn upon retrospectively to locate and validate the emergent action within the wider context of meaning.' (p. 5). Ranson *et al.* argue in this, that action is emergent from tacit knowledge on how the organisation operates and that roles and rules are called upon retrospectively to place these actions in a wider frame. Barley & Tolbert (1997) and Burns & Scapens (2000) propose a similar dialectic relation between action and structure. Action reproduces structure, while structure constrains as well as guides proper courses of action. This temporary stable configuration comes primarily out of the taken-for granted interpretive frameworks. These remain inarticulate in the routine of action; i.e. routines are expressions of these taken for granted arrangements (Barley & Tolbert, 1997); but routines do not reveal the full array of assumptions underlying them. This observation brings us to the point made by Burns and Scapens (2000), who explicitly addressed the relationship between routine behaviour and their institutionalisation.

3.2.7 Institutionalisation of routines

Burns & Scapens (2000) defined an institution as: 'the shared, taken for granted assumptions which identify categories of human actors and their appropriate activities and relationships'. Put in different words is the description of Boons & Strannegård (2000): 'Institutions are to be understood as action patterns that have become taken for granted within an organizational field. Repeated actions turn into institutions that, in turn, exert influence on organizations' (p. 9). Jepperson (1991) provides us with a different definition, that points to the role of routines in institutions. Jepperson notes: 'institutions are those social patterns that, when chronologically reproduced, owe their survival to relatively self-activating social processes….That is, institutions are not reproduced by "action," in this strict sense of collective intervention in a social convention. Rather, routine reproductive procedures support and sustain the pattern, furthering its reproduction – unless collective action blocks, or environmental shock disrupts, the reproductive process' (p. 145). Burns and Scapens see institutions as underlying human behaviour, while Boons & Strannegård depict institutions more as human behaviour itself. However, all authors agree that shared assumptions partly drive human behaviour. But 'there is hardly any research linking the micro processes of sensemaking to the macro processes of isomorphism' (Boons & Strannegård, 2000, p. 13). How individual sense making relates to institutional pressures, including isomorphism, remains unclear.

Burns & Scapens (2000) note that the process of encoding institutional principles into routines draws on taken-for-granted assumptions that are currently embodied in meanings, values and power. From this it follows that we are forced to talk about change, as stability is unobservable to the individual by its taken-for-grantedness. Stability is only determined by retrospective sense making, on events and experiences that have already elapsed. Moreover, cues for change are found in events that take unexpected experience out of the *experience stream*. Therefore, the encoding of institutional principles into routines is almost exclusively associated with change, be it revolutionary or otherwise. This leads to the question: on what level does encoding occur? Is it the individual who routinises actions through the interpretation of institutional principles or does it involve a common effort by all participants that yields a common result?

In the mere act of interacting, the individual participates in the creation and adaptation of the intersubjective sphere in which local interpretations are being made. 'Individuals take action (externalisation), and when individuals interpret these actions as heaving meaning beyond the idiosyncratic action, objectivation takes place' (Boons & Strannegård, 2000, p. 9). The act of interpretation is the *sense making* of the action's result. Jepperson (1991) proposes, as do Burns & Scapens (2000), that routines are a necessary precondition for institutions to arise. They allow for institutional reproduction, without conscious action aimed at this reproduction. Jepperson (1991) stresses that an institution is able to resist the blocking efforts of single individuals, hence the attention to collective action. Furthermore, he observes that institutions are relative to particular contexts. Primary

levels of organisation can operate as institutions relative to secondary levels of organisation. A microcomputer's basic operating system appears as an institution relative to its word processing program etc. Furthermore, whether an object is an institution is relative to a particular dimension of a relationship, as well as its relation to centrality. An example would be the Eiffel tower in Paris, which may count as an institutionalised landmark, based on its attractiveness and its associations with all that the city has to offer, but it is no institution when it comes to its aesthetic qualities. In short, institutions are dimensional and relative to context.

A further feature of an institution is that it is typed by a reproductive process (as noted before). Jepperson (1991, p. 145) puts it as follows: 'institutions are those social patterns that, when chronically reproduced, owe their survival to relatively self activating social processes'. The distinguishing factor is that institutions are able to reproduce, without conscious and sustaining action. Institutions can therefore include persistent, but unintended consequences of social interaction. Although reproduction is an essential property of institutions, not all reproduction relates to institutions. Jepperson argues that conscious action can be a reproductive process, but that it is not institutionalised. He opposes institutionalisation and action as two different forms of reproduction. This is a very important distinction in delineating what constitutes an institution. A social pattern is reproduced through action, when persons constantly intervene and are mobilised in processes that secure own their persistence. These processes are sustained and supported by the action of individuals. Jepperson talks about what we earlier called action routines, which are not accompanied by scripts. Although action might be repeated to support the reproduction of the pattern (think of the earlier example of the yearly move-in in student dormitories), it does not involve the absence of conscious action, and it cannot be typed as a self activating process, since it needs conscious intervention. Institutions, on the other hand, are able to reproduce without such intervention. Routinised behaviour can embody institutions, although these routines are primarily limited to the scripted invoked routines that were discussed in section 3.2.3. Routine action patterns that are invoked 'automatically' as part of a script performance, are not addressed reflectively by the individual. But consciously selected repeated actions do not embody institutions per se, as these actions are reproduced through conscious intervention. Jeperson has addressed this action vs. institution argument: '*this institutionalisation/action contrast is a central one. If one participates conventionally in a highly institutionalised social pattern, one does not take action, that is, intervene in a sequence, make a statement. If shaking hands is an institutionalised form of greeting, one takes action only by refusing to offer one's hand. If attending college has become an institutionalised stage of the life course, a young person takes action more by forgoing college than by enrolling in it. The point is a general one: one enacts institutions; one only takes action by departing from them, not by participating in them*.' (Jepperson, 1991, p. 148-149).

Burns & Scapens and Barley & Tolbert as well as Berger & Luckmann propose that institutions arise partly because of the duality of structure and action. This has been

translated into the interaction between rules and routines in the Burns & Scapens (2000) framework. They argue that rules may lead to routines, but that persistent routines can also be formalised into rules to facilitate easier access for new entrants. A nuance relating to the importance of rules to institutions must be applied. Rules (formal procedures fixed in manuals and operating procedures) have little direct influence on institutions, in the sense of the term "institutions" as used here; but they do influence them indirectly. As argued by Burns & Scapens (2000), rules either serve as an occasion for the conception of routines or as a result of them. Rules themselves affect institutions in a large part by means of the influence they have on routines.

A further feature of institutions can be found in their ability to increase predictability. The presence of institutions yields predictability for actors in constraining action choices as well as enabling them. Institutional arrangements are legitimising in the sense that they allow for action choices that are considered acceptable to the majority. The value of institutions lies in the fact that what constitutes an acceptable response is known beforehand. Therefore, the presence of institutions *limits the need for retrospective sense making because it enhances predictability of expected responses to action. In other words, the existence of institutions promotes the use of the routines that form its very fabric. Consequently, we come to the same conclusion as above: institutions are able to reproduce, without conscious action choices*. Moreover, institutions allow for predictability. For example, March (1994) observes that people can rationalise their decisions and actions by referring to common expectations and preferences that are shared by a group of people, and which are formed in the past through a collective process of generic sense making or even as a product of the forming of culture. On a macro scale, the group belongs to what Grit (2000) refers to as a value sphere: the political value sphere and the economic value sphere are examples of social entities that have similar values and beliefs on how to obtain legitimacy from the entity.

From the above a view of institutions emerges: institutions are collective and routine patterns of action and cognition *that are able to reproduce* themselves without conscious intervention. Not all routines are institutions (Burns & Scapens, 2000), but all institutions are constituted by routines (and more). The notion that institutions reproduce without conscious intervention, points to the presence of scripted action. More specifically, those routines that are invoked through the performance of scripts do not require any high level of reflectiveness. Consequently, these 'automatically reproducing' routines are more likely to influence institutions and institutional change than consciously invoked routines. Moreover, 'automatically' invoked collective routine actions are likely to be taken for granted, as they do not require elaborate reflection on their appropriateness or necessity. Therefore, particularly those routines that do not involve conscious interventions to ensure the flow of actions may have institutional characteristics. Additionally, whether something is institutionalised depends on context. More specifically, institutionalisation is contingent upon its level of organisation, its centrality and the type of relation. It is through the individual as well as the collective invoking of routines that institutions are collectively

enacted. Institutions are thus the outcome of collective as well as individual invoking of routines. Change in institutions thus begins with the breakdown of routine behaviour at a collective *and* individual level.

3.2.8 A framework of scripted action

This section will offer a synthesis of the previous sections, with the purpose of offering a conceptualisation of action decisions under conditions of stability that include individual expressions of institutionalised behavioural patterns. Consider Figure 3-5:

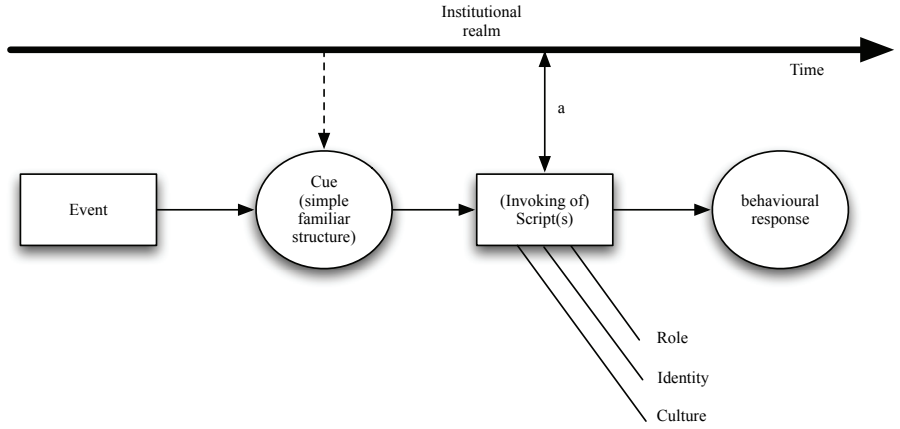

Figure 3-5: Scripted action

The framework depicts decisions as triggered by cues; simple familiar structures that point to specific possible scripted courses of action. These scripts are readily available, but since more possibilities exist, a choice needs to be made. The existence of these scripts depends on three general elements: role, identity, culture. Moreover, the existing set of institutions play an important role. First, this section will briefly review the three elements, then the effect of institutions will be discussed.

Role: roles are the patterns of expectations that belong to specific positions in formal structures. They relate to the innate, learned behaviour that belongs to that position. Roles promote stability in behaviour, just because of the predictability that accompanies role fulfilment. Roles are based on mutual expectations that are associated with a number of scripted action possibilities. Therefore, role-incumbents have a number of learned scripts at their disposal that have been determined to be acceptable action alternatives.

Identity: a number of properties can be attributed to roles; that is, they are essentially external to the incumbent, but in order to come to purposeful action, identity needs to be taken into account (see Figure 3-1). Identity refers to how we see ourselves. For example, the image we have of our purpose in the organisation is an example of our identity. Identity and ego-identity are therefore drivers of behaviour. In terms of the above conceptualisation identity relates to script selection based on an image that one has of oneself. As in previous sections, it is important to stress that identity is private, but it is conceived by virtue of the environment of the actor. Who we are is observed by others' reactions, rather than a private determination of who we want to be. Identity thus is a privately held view of oneself, which affects the selection of proper scripts. Indirectly, this choice is not at all private as identity is conceived with the help of interaction and communication.

Culture: As argued earlier, culture is a collective phenomenon, but individuals carry it forward in time by five types of schemas: Self schemas; Person schemas; Organisation Schemas; Object/Concept schemas and Event schemas. For these cognitive structures to become culture, they have to be shared to a certain degree. But, as indicated before, these have the tendency to become similar between individuals because of the sharing of cues and socialisation into social entities such as departments or networks.

Institutions: as noted before, institutions are self-activating social patterns that are externalised from individual actors. Yet, actors find themselves under their influence, but actors usually do not perceive themselves as able to change institutions. They simply are taken for granted as "the way things are". This taken-for-grantedness is akin to scripts that appear to be fixed to the individual (e.g. a recurring performance review). Institutions can prevent actors to be aware of all possible action alternatives. Moreover, action alternatives may be tacitly known to be unacceptable, and may therefore not enter an evaluation of scripts at all. This holds for different situations and for different degrees. Since institutions are dimensional and relative to context, social patterns that are self-evident in a work-environment may have no institutional characteristics in a family setting. Institutions enhance predictability as they involve acceptable means to ends. For example, actors may not be able to change the purpose of the accounting system in an organisation. This purpose is an inherent property of the system and it is accepted as such without questioning. This does not preclude actors from forming expectations regarding outcomes of the system and consequences thereof. Institutions therefore limit the number of applicable scripts as well as enhancing predictability by making potentially variable factors fixed. Institutions thereby reduce environmental complexity, by reducing the number of variables. Moreover, they are able to fill in blanks about future behaviour. Any assessment of the future is then greatly facilitated, but since much is then based on assumptions, accuracy is sacrificed for simplicity.

The framework introduced in this section shows an arrow pointing from the institutional realm to the cue, to indicate that the perception of what constitutes a cue, is, at least in part

institutionally determined. Some environmental signals have ready-made scripts associated with them, while others are ignored, as they do not represent any meaningful information. As the above discussion indicated, institutions allow some scripts to be more available than others; therefore, the framework also contains an arrow pointing from the institutional realm to scripts. This arrow (a) represents the view in this chapter that scripts constitute institutions, in a similar fashion as proposed by Barley & Tolbert (1997). Institutions are encoded in scripts and scripts are externalised and objectified in institutions. This thesis uses the term 'constitute' to refer to this reciprocal relation between scripts and institutions. It is important to note that although I argue that scripts constitute institutions, it does not exclude different notions to be part of an institution. The term 'constitute' is used to in the meaning of 'giving form to'. By this, I mean that institutions are sustained and given form by individual scripts.

Arrow (a) represents the encoding of institutional principles in scripts. It also indicates that institutions continue to exist through the continuous reproduction of these scripts. It is important to point out that Barley & Tolbert saw in this reproduction of scripts a source of institutionalisation of new principles. They demonstrated this view by including a diachronic relationship between scripts and institutions, demonstrating changes over time. I have depicted the relation between institutions and scripts as a synchronic relation. This does not allow for changes, as it emphasises that institutions continue to exist because they are reproduced by scripts. Contrary to Barley & Tolbert, this arrow does not depict a process of change over time. Rather, the arrow focuses on the stability between institutions and scripts. Finally, the framework depicts an arrow connecting scripts and action. Action can result from the performance of a script, and as such it is the outcome of a process that starts with an event and the recognition of associated cues.

This section explored the decision making process under conditions of stability; i.e., it addressed the decisions that are made 'off the top of our heads'. This section has led to the relatively simple sequence of events that occur when making script-assisted choices. These revolve around the selection of cognitive scripts that are available for legitimate responses. The relevance of script-assisted decision making to this work lies in the recognition that routines (the repetitive occurrence of action patterns) themselves are not directly resistant to change, as Feldman (2000) has shown. The availability of action-patterns in itself does not necessarily make other alternatives unreachable. As Feldman demonstrated, these routines can change from one iteration to the next. From this, it was concluded that statements on resistance to change in relation to routines need an explanation on the causes of invoking specific routines and the level of reflectiveness that accompany the invoking of a routine.

Gioia & Poole (1984) argued that the more stereotypical a situation is, the more automatic the processing of scripts will be. It is under these circumstances that people can display 'resistance' to change, simply because scripts that were suitable in the past are still being invoked. Under these circumstances, one cannot argue that individuals are malicious in

their reactions, but rather that people continue to use specific cues that point to proven scripts. Choice is then a tacit selection between different scripts. For example, an organisation that experiences severe fluctuations in sales may have found ways to deal with these fluctuations. The organisation can avoid distress in the months where sales are low, as it is used to these occurrences. It can take well-known measures such as sales promotions to increase sales. The cues (in this case, sales figures) lead to the performance of scripted action plans. The notion of cues in this respect is the trigger that causes action plans to be executed. The cues are simple and familiar structures (formal or informal) that are accompanied by action alternatives that present themselves quite naturally in response to the cue. In extremis, one could think of a car that pulls constantly to the left. The driver quite routinely, and without conscious choice, corrects by steering right to neutralise this effect. The cue here is that the car steers left. This causes an associated reaction: to steer right. The entire process may occur sub-consciously; and off the top of one's head.

How scripts are shaped and invoked depends on a number of elements in the social setting. I have defined identity and role, as well as culture and institutions. These all guide the unconscious selection of scripts and lead to the selection of appropriate courses of action. Now, if this process is triggered in situations that can be construed as stereotypical, then the entire selection is likely to be tacit. This means that the energy saving feature of routines is maximised, because they are invoked as learned responses, rather than consciously selected courses of action.

If anything should be clear from this work so far, then it is that we all build structures to create our own predictable environment. We encapsulate ourselves in familiarity that allows us to reduce the probability of surprise. Yet, surprise is unavoidable and is at the core of change. Now that the primary conditions of social stability are known, the next step is to look at how change can occur under these forces that promote stability. This is the topic of the next section.

3.3 Change in the face of persistent scripts

The previous section has demonstrated the inherent stability of script-assisted decision-making. Individually, actors make sense of their environment through schemas and scripts that allow them to give meaning to events without resorting to extensive search behaviour. Apart from the occasional sub-optimality that this yields, it is a highly efficient mode of information processing. At an organisational level, stability is served by the existence of institutionalised structures that go relatively unnoticed. These structures are self-enforcing, and allow for information to be processed in terms of those institutions. This makes it unlikely that institutions can be easily challenged. Yet, no author denies that change is possible, but merely that it can be a difficult process. The existence of routines as expressions of inarticulate schematic decision-making challenges change agents. Therefore, this section will address how change is possible for an individual who operates

under the influence of scripts and schemas. The section will be structured as follows. First it will introduce how this chapter uses the term 'change'. It will then present a theoretical framework of change, that is explained in the remainder of the chapter.

3.3.1 Changes in scripts

Changes in scripts can emerge through first order or second order change. First order change involves changes in behaviours while existing schemas remain in tact. Second order change refers to changes the in underlying shared schemas that provide organisational participants with meaning on the purpose of the organisation and their role in it. Bartunek & Moch (1987) define second order change as the conscious modification of present schemata in a particular direction. It is analogous to revolutionary change mentioned by Burns & Scapens (2000), as it typically begins with 'a perceived crisis strong enough to "unfreeze" accepted interpretive schemes (Schein, 1980) for at least some organisational members' (Bartunek, 1984, p. 364). Giddens refers to these shocks as 'critical situations' that he defines as 'circumstances of radical disjuncture of an unpredictable kind' (1984, p. 61). Bartunek identifies several examples of such shocks; such as poor performance, unsuccessful management, or major shifts in power. These events are partially analogous to the concept of cue, coined by Weick (1995), which triggers the act of sense making. Weick includes examples such as unexpected cash drains and emergencies. Cues can initiate second order change, when they serve to 'challenge the validity of organisation's interpretive schemes' (Bartunek, 1984), but they can also trigger the automatic use of schemas already in place, and therefore prompt first order change, rather than second order change. Busco *et al.* (2001) observed that an Italian company was taken over by General Electric, which served as a shock that cancelled out ontological security and had the potential to open up and redefine existing arrangements within the organisation. This would be an example of second order change. Weick (1995) argues that a breakdown of routines raises an awareness of the scripts that drive these routines, and cause actors to engage in more conscious sense making. Nielsen and Bartunek (1996) suggest that second order change processes involve a number of components: it is usually initiated in response to events that cause a sense of crisis or urgency, which lead powerful organisational members to perceive that established schemas are inadequate; it leads to the development of alternative schemas and; it could lead to possible conflict between the adopters of new schemas and the holders of older ones.

Change, as it is regarded here, is the adaptation of existing scripts and the development of new scripts if deemed necessary. As noted above, Louis (1980) argues that revisions in cognitive scripts result from sense making. Therefore, this section will introduce a framework of sense making. It ties the above insights into a framework explaining how organisational members deal with an unexpected experience and a resulting failure of scripts at an individual level and routines at an organisational level to address events meaningfully. It is here that the second interpretation of sense making materialises. Sense making here is the creation of cognitive scripts that are able to deal with new experience.

This concept of sense making is likely to occur when a cue, a shock, or a critical situation occurs. In other words, a disruption precedes the act of sense making.

3.3.2 Sense making of first and second order change: coping with ambiguity

The framework is an adapted version of the one presented by Louis (1980), in which she models the sense making process of new entrants in an organisation. However, the framework is applicable to a wide variety of situations including the discontinuity of routines as both incorporate conscious, reflective action to deal with previously un-encountered events. Consider this adapted framework in Figure 3-6:

Figure 3-6: Action definition when scripts break down

The framework depicts the process of action choice, in conditions where cognitive scripts are inadequate for guiding action decisions. In this sense, it belongs to the left on the Gioia & Poole scale of automatic script processing (see page 48), which they refer to as controlled processing. The framework describes action choices under the condition that existing cognitive scripts break down, and are deemed insufficient to interpret new experience. This is relevant to the question of the breakdown of routines; for the recognition of the inappropriateness of scripted knowledge leads to the conscious assessment of the appropriateness of routines. Actors will therefore deal with newly encountered events in a different manner; as will be described below. Apart from an assessment of the process of action choice, the framework also yields a possible understanding of revisions to cognitive scripts. As Louis (1980) argues, updated expectations and revised assumptions are analogous to revisions in cognitive scripts. Before I turn to an explanation of the framework, a clarification needs to be provided. Comparing Figure 3-6 above with Figure 3-5, which depicted conditions of stability, one may notice that a component visualising *institutions* is missing in Figure 3-6, which depicts action choices without support of existing scripts. This is not because institutions are not important here. Rather, I am dealing with two theoretical situations: full stability, meaning that actions are fully governed by appropriate scripts; and change, meaning that individuals cannot use existing scripts. As scripts can constitute (parts of) institutions, and as scripts are assumed to be absent in situations of change, institutions are theoretically not present. However, scripts and institutions are never totally absent in human (inter)action. They are also seldom as dominant as assumed in my depiction of stability (Figure 3-5). Rather, these situations of stability and change are two ends of a continuum.

3.3.2.1 Change, Contrast & Surprise

Figure 3-6 starts with the introduction of change. Change in itself is no guarantee that the process of sense making will take place. Individuals are likely to subject surprising events to closer inspection. Surprise can emerge from change and contrast, including unexpected outcomes of actions. Where Burns & Scapens (2000) observe that some kind of 'shock' is necessary to open up existing arrangements, they refer to the consequences of this shock, such as surprise and anxiety. Weick (1995) refers to the events causing surprise and associated emotions as cues. Although cues can incorporate shocks, they can be more general. Extracted cues are simple, familiar structures that are the seeds from which people develop a larger sense of what may be occurring. Kiesler and Sproull (1982) specify cues more fully: 'people attend to and encode salient material–events that are unpleasant, deviant, extreme, intense, unusual, sudden, brightly lit, colourful, alone, or sharply drawn. In the world of organizations, salient information includes unanticipated drains on cash flow, new taxes and regulations (unpleasant information), predictions of best and worst outcomes (extreme information), disruptions of routine and emergencies (intense, unusual, sudden information) and publicity and iconoclastic executives (colourful information).' It was noted earlier that scripts provide the individual with

predictions of sequences of events as well as well as of their outcomes. This means that scripts provide prospective explanations. As long as the predicted outcomes are realised, no need exists for conscious evaluation. However, when the predicted outcome does not occur, it affects the individual's cognitive consistency (Abelson *et al.*, 1968). Discrepancy between anticipation and experience leads to a state of tension, which can serve as a cue. Hence, when a script fails, the individual develops ex-ante explanations for this discrepancy.

Louis (1980) observed that these retrospective explanations are produced through the process of sense making. Although it may have been suggested that experience is singular, it is not. Rather, *an experience* is part of the experience stream. Actors take experience out of the ongoing stream, because they are triggered to do so. The concept of sense making emphasises that this attention to specific experiences occurs when a cue causes an event to be lifted out of the ongoing stream of experiences (Weick, 1995, p. 85). People are in the middle of ongoing experiences, and an interruption of those projects typically lifts them out of the ongoing stream. Weick argues that this interruption induces emotion; hence interruptions of experiences introduce the element of emotion in sense making. A necessary condition for emotion is the occurrence of arousal. Arousal occurs slowly, which means that it occurs retrospectively. Once arousal is noticed, actors try to link the situation that causes arousal to prior situations that make sense to them. Shocks cause emotions to be attributed to events. These emotions can then linger on as new occasions for sense making can cause individuals to refer back to the old sense making occasions that originally induced these emotions. Past events are reconstructed in the present as explanations, because they feel the same, rather than that they look the same (Weick, 1995, p. 49). The actor is then able to recall the emotions associated with that previous occasion. Prasad & Prasad explained the attribution of emotion to the computerisation of the workplace as follows: 'employee translations of managerial discourses contributed in some ways to the reduced appeal of the computer technology. These translations seemed to add a layer of emotional discomfort in working with the system because of the negative connotations they carried' (2000, p. 400). Note that the concept of cues fits the notion of management by exception. It becomes management by the unexpected or the management by cues. Sense making by cues can also provide the trigger that is needed to abandon existing routines. This occurs when experiences are lifted out of the stream of experience and get emotion attributed to it. Cues can then be interpreted as those mechanisms that cause decision makers to reconsider their cognitive scripts. They cause specific experiences to be consciously evaluated.

Two distinct processes, both of which are heavily depending on context, shape an extracted cue. Firstly, context defines what is extracted as a cue. Some potential cues are never picked up as such and therefore are not directly available for sense making. Secondly, context influences how cues are interpreted. The assessment of the meaning of events influences the importance and the meaning of a cue.

3.3.2.2 *Prospective Sense Making*

I noted earlier that different authors have different opinions of the degree of conscious processing of situational information that it associated with sense making. I argued that, to this thesis, sense making is the conscious interpretation of events and experiences when scripts are insufficient to deal with particular events and experiences. Now, a second difference in the interpretation of sense making is discussed. The framework devised by Louis (1980) shows sense making as preceding action, while Weick (1993a, 1995) and Garfinkel (1967) have observed that sense making occurs retrospectively. It comes primarily down to a definitional issue. Louis argues that the result of sense making is the provision of meaning to surprise that leads to action[1], while Weick notes the opposite: one of the products of an action is the attempt to make sense of the elapsed action. It must be clear that on occasions where there is no automatic script processing, people attempt to give meaning to events and attempt to formulate preferences prior to taking action. But it also is logical that actors interpret the results of their actions and then give meaning to these results. Casual observers may conclude that sense making occurs both prior to, and after action has been taken. This is sensible in light of Weick's (1995) remarks that sense making is ongoing. Yet, it may cause confusion to this attempt to conceptualise the processes involved. Therefore, to facilitate the analysis of sense making, two concepts of sense making are introduced: prospective sense making and retrospective sense making. This is depicted by the following figure that indicates that sense making can be retrospective, of elapsed action; and prospective, of problem analysis:

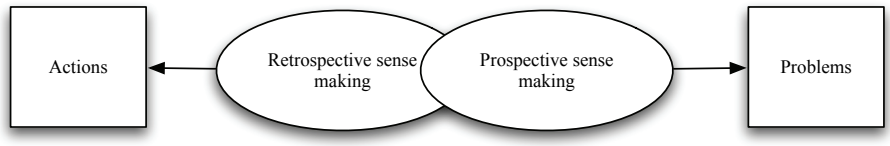

Figure 3-7: Prospective and retrospective sense making

Prospective sense making involves the process of making sense of situational information before selecting action, in the absence of guiding and automatically invoked schemas and scripts (primarily voiced by Louis). Conversely, retrospective sense making occurs after action has been taken and is mainly championed by Weick (1993a, 1993b, 1995) and Garfinkel (1967). The latter comes closer to terms such as legitimation and justification. There is one important difference between prospective and retrospective sense making. That is the amount of information available. Weick (1993a) pointed to this phenomenon when he remarked that pre-decision behaviour differs markedly from post-decision behaviour. He remarked that: 'during the pre-decision period, people pay equal attention

[1] In her own words: 'It is crucial to note that meaning is assigned to surprise as an output of the sense-making process, rather than arising concurrently with the perception or detection of differences' (p. 241).

to alternatives in an effort to reduce their ignorance. If there is differential attention to alternatives, they pay more attention to the alternatives they eventually reject. This is the pattern of information processing that Daft & Lengel (1986) associate with uncertainty' (p. 30). Retrospective sense making, that is the provision of meaning to elapsed action, is aimed at the provision of committed interpretation. This means that actors become bound to their behaviours. Weick argues that this involves committed interaction. Actors often invoke macro entities to justify behaviour, and in doing so, reify the existence of these entities ('I did so, because head office wants me to'). Furthermore, retrospective sense making is more about *interaction* (see chapter 8 and 9), than action. It is inherently social, and thus the observable outcomes of other people's actions are considered important, as those constitute the visible and shared features of action. Therefore, while prospective sense making is more about choosing action among alternatives (indeed much akin to the notion of bounded rationality), retrospective sense making is more about the justification of action to oneself and others, as well as the committing to this action. Apart from these differences, both types of sense making (prospective and retrospective sense making) relate to the process of giving meaning to equivocal information.

Actors synthesise meaning under the influence of all events and experiences that are underway. This means that the main problem for actors is not too few meanings, for which more information should be made available, but rather too many. The problem for the sense maker is one of equivocality, rather than one of uncertainty. Therefore, the sense maker needs norms, values, priorities and opinions to help him to prioritise to which experiences he attends. 'Clarity on values clarified what is important in elapsed experience, which finally gives some sense of what that elapsed experience means' (Weick, 1995, p. 28). The retrospective nature of sense making is most clearly illustrated by Weick's statement: 'how can I know what we did until I see what we produced?' (1995, p. 30). Action is a precondition to making sense. For example: speaking about events makes the events tangible and helps to define their contents. The action of speaking therefore influences the substance of the experience and clears the way for further sense making of the events.

The stream of experiences is never ending, and so is the process of sense making. Because of the propensity of the sense maker to dig into previous events and experiences from this never ending sequence, the influences on sense making are nothing short of a mishmash of experiences and meanings that were once given to events. This quality of sense making is related to March's concept of rule following in choice (see chapter 2). The matching of situations to appropriate responses is the act of making sense of that experience by matching earlier experiences to it. The selection of an imperfect routine to make sense of an experience is a satisficing, rather than optimising, response by the actor. Consequently, sense making is a chain of satisficing behaviours, which are, not surprisingly, far from optimal.

Sense making is plausible rather than accurate in that it attempts to provide meaning to the facts available at that specific time. As information is always incomplete, one can never be sure whether sense given to events is indeed accurate. Sense is perceived correct when it fits the observable facts. Where multiple meanings exist, sense making amounts to finding an interpretation that in later stages can be shared, and possibly becomes the dominant interpretation. The sense made of events is maintained until events occur that make this interpretation no longer sustainable. The individual has no certainty of the 'truth' of his interpretation. Meanings are accepted, until they cannot be sustained when new information becomes available. In short, sense making results in plausible explanations for events.

Sense making: Others' interpretations

Sense making is never solitary. Boland (1993) argued that people are able to draw from many interpretive schemes and norms that are capable of influencing their action choices at a given time, and thereby influencing the organisational arena. Arrington & Francis (1993) argue that our economic choices and actions are both conditioned by and consequential for others who share our status as citizens of moral-economic communities. Burns and Stalker have put this as follows: 'In working organizations decisions are made either in the presence of others or with the knowledge that they will have to be implemented, or understood, or approved by others. The set of considerations called into relevance on any decision-making occasion has therefore to be one shared with others or acceptable to them' (1961, p. 118). The presence of other is always near, even when they are not physically there. What a person does is always contingent on others, spread out over time. Past interactions affect current sense given to action. This is why it is very difficult to point to the chain of events that leads to the sense that is made of events. Weick (1995) observes that the alignment of acts within social settings does not necessarily occur, because individuals make equal sense of the events surrounding them. Rather, actions can be aligned *despite* the sense given to events. Co-operation can occur out of necessity, the need for help to achieve pre-set objectives, or because it is the outcome of compromise. Hence, co-operation may consist of *workable* relations, rather than shared beliefs and meanings. It does not require people to share interpretations of the various events.

Sense making: Local interpretation schemes

Rather than viewing *the environment* as an impersonal space objectively out there, it is action that enacts the environment, thus establishing a link between action and environment. Action causes changes in the environment and on a larger scale, action causes constraints to be present in the environment. Action creates stimuli, which in turn induce further action. In acting we change the conditions around us. Therefore, by definition, action (even performed by a single individual) yields dual results. We do not only make sense of it in terms of what it brings us, but also in terms of the changes in the environment it creates. This can be illustrated by the analogy of Newton's Third Law of

Motion[1]. Action in itself is meaningless. Action is only as good as the reactions that it causes. We interpret actions by the outcomes that we can observe, but these outcomes are as much a result from our actions as they are from the interpretations of others.

Prospective sense making is problematic in this respect. If action is a guide for the sense given to experience, then judgements made on possible action choices beforehand are by definition incomplete. Yet, individuals have access to various sources of information that allow them to make sense of their actions before they occur. Local interpretation schemes of the social entity to which actors belong can serve as a guide. In other words: elapsed action that moulded local frameworks of interpretation serves as one of the guiding principles in selecting action. As Louis (1980) argues, this is especially problematic for new entrants, who do not yet have an intimate knowledge of local interpretations. In simple terms, they do not know yet how to react to events within their environment.

Sense making: Predispositions & purposes

The most common form of sense making is making sense of self. The construction of identity is grounded in the actor's interaction with his social setting. While dealing with others, actors constantly adapt the image of self they present, depending on what they perceive as the most appropriate one to display. But rather than being opportunistically engaged in matching an infinite number of selves to infinite number of different social settings, the redefinition of self influences how actors see themselves, as well as how they perceive the very social setting in which they operate. Hence the redefinition of self influences how the actor perceives the social setting. Thus, the interaction between the self and the social context works both ways. 'Once I know who I am then I know what is out there' (Weick, 1995, p. 20). Making sense of self stems from three major sources: (1) it can be triggered by a failure to confirm one's self. The actor, who fails to confirm an image of self, is left with a gap in his self-image. This is highly unsatisfactory as it also affects his outlook on his environment. Social interaction is grounded in the self, therefore a lack of knowledge of the self influences the ability to interact with the environment. (2) The making sense of the self occurs whenever a discrepancy is felt between action and beliefs. Redefining self could reduce this discrepancy and thereby ease the accompanying anxiety. Again, whether this new image of self is displayed or not, it could potentially alter the outlook on the environment, and thereby alter the environment as it is presented to others. (3) Defining identity, which is part of the self, is not fully in the hands of the actor. By projecting identities in the environment and observing the reactions of others, actors learn about their own identities.

[1] Newton stated that for every action there is always an opposite and equal reaction. I do not suggest that this is neccessarily the case here, but Newton's formule points to action *and* the associated reaction. This is relevant to sense making as I argue that individuals make sense of their actions by observing the reactions they produce.

Moreover, identity is partly defined by actions taken; not only those of oneself, but also those of others. The cues for identity come from the conduct of others, but as the actor is making a real effort to influence the actions of these others, by interaction as well as his own actions, he influences his image of self and identity, by the actions he undertakes and the effects this has on his environment. An example has been provided by Prasad & Prasad who discuss resistance to computerisation in a health maintenance organisation. They observe: 'the act of *wilfully* and *consciously* resisting certain elements of everyday control constituted individuals' own subjectivities as autonomous individuals in charge of their lives, willing to stand up for themselves if necessary. The researchers were struck by the frequency with which claiming resistance was also accompanied by explanations such as, "I have never been a passive kind of person", or "I think I know when to speak up." Interpreting their own actions as resistance thus seemed to affirm for many organisation members, their own identities as autonomous individuals, fully capable of participating in key organisational processes, even when officially excluded from doing so.' (2000, p. 396, emphasis in original). Indications of what one's purpose is in an organisation, comes from role fulfilment, as discussed earlier in this chapter: role and identity are important influences on sense making efforts.

Sense making: Past Experiences

A number of studies have claimed that path dependency in processes of change plays an important role. When it comes to technical change (Antonelli, 1997; Dosi, 1997) or economic and institutional change (North, 1991; Denzau & North; 1994, Vromen, 1995, Van der Meer-Kooistra, 2001), path dependency seems to fulfil a pivotal role. March has argued that 'decisions and outcomes in a particular environment depend not only on that environment but also on previous environments and the ways in which they have been experienced. The historical path makes some outcomes unrealisable in the future, including some previously realised' (1994, p. 235-236). But the literature is not very explicit when it comes to assessing the actual importance of path dependency at the micro- (that is: individual) level and how it interferes with processes of organisational change[1], although March and Simon (1958, p. 9) postulated: 'The behaviour of a (human) organism through a short interval of time is to be accounted for by (1) its internal state at the beginning of the interval, and (2) its environment at the beginning of the interval. The two sets of factors, the initial state and the environment, determine not only the behaviour but also what the internal state will be at the next moment of time' thus 'the internal state of the organism, by the terms of the description, is implicitly a function of its whole previous history'. We do know that processes of organisational change within individual

[1] Path dependency has been an issue widely explored in industrial economics. Its impact in technological innovation has been especially acknowledged. Historical adoptions of new technologies that have been researched using path-dependency include the power source of the automobile (the internal combustion engine vs. the steam engine), the QWERTY keyboard and the VHS videocassette recorder. These approaches have focused on path-dependency mainly on a macro scale and have primarily directed attention to the area of technological innovation.

organisations are infused with path dependent behaviours. For example, the framework proposed by Burns and Scapens (2000) implicitly relies on path dependency to explain the evolutionary properties of institutions. Their framework would not explain ultimate routinisation of new procedures, if it were not for a temporal component that allows for reliance on past events. Allowing path dependency to become an explicit issue in this study, serves as an extension of theoretical insights on how routines function. As noted before, it is taken implicitly as an important property, but it may be fruitful to explicate the issue.

Hopwood, in his discussion on the 'archaeology of change' concluded that: 'the emergence of a particular account has been shown to be neither an unproblematic reflection of a more abstract intent nor a sudden discovery or transformation. Rather the cases have illustrated the more positive ways in which specific local origins moderated the path of accounting development and the multiple and even conflicting conditions of possibility that gave rise to particular manifestations of the accounting craft' (Hopwood, 1987, p. 227). Furthermore, Briers & Chua (2001) have observed that with respect to accounting change, its unevenness and materiality prompt questions about the preconditions and processes of change. They illustrate this by pointing to the substantive and lingering impact that distant (in both spatial as well as temporal dimensions) discourses and seemingly unrelated events may have on the organisation.

Yet, explicit explorations of the notion of path dependency on organisational change have been very limited. 'One would like to have some 'theoretical tales' … providing some guidance on the nature of the processes involved, and also helping in answering questions like: how important path-dependency itself is? Does it involve phenomena of irreversible lock-in?' (Dosi, 1997, p. 1539). Not only do we need more theoretical explanations on the phenomenon, but also empirical investigations into the matter may be warranted. Indeed, 'the empirical evidence on the way in which path-dependent process develop over time is still meagre' (Egidi & Narduzzo, 1997, p. 678). The above calls for more research on the topic all hold when related to individual routines as well as their collective, organisational counterpart. Although past experience may well be of importance, it is impossible to specify beforehand what aspects of an individual's earlier experiences play a role in making sense of newly encountered events. This needs to be clarified by respondents in the actual investigation. This investigation will be presented in later chapters of this thesis.

3.3.2.3 Attribution of meaning

The outcome of sense making is the attribution of meaning. The event is placed in a context and emotions are associated with it. It is akin to consensus on what an event means for the organisation and the individuals involved. For example: an unexpected drain in cash flows may mean a greater emphasis on debt collection, and therefore may be of special importance to the finance department, but to the marketing department, for

instance, lower cash flows could also mean a need for increased sales. Whatever it may be, the attribution of meaning signifies the order in the chaos that unexpected events may have caused. The presence of subcultures is very important in this respect (Harris, 1994). Subcultures can be similar to the so-called "provinces of meaning", as Schutz referred to them. A consequence of the presence of these provinces of meaning is that meaning attributed to an event might differ between subcultures. Then the stage is set for misunderstandings about the consequences of an event. The framework depicted in Figure 3-6 suggests that the attribution of meaning occurs as a result of sense making and is an input for the selection of action alternatives. The attribution of meaning is therefore an important determinant of the action choice that will be selected, and, potentially, an important source of ambiguity and conflict.

3.3.2.4 Selection of behavioural response

I would like to emphasise that the individual is not a tabula rasa, who can select an optimal solution. Rather, in the theoretical case of change described in this section, the individual attempts to be reflective in a response to the presence of cues. However, he is influenced by numerous factors that affect the act of sense making and the resulting meaning given to the event. What is left is a decision based on the private meaning that the event has for him, rather than the event itself. In one sense, behaviour is the outcome of sense making processes. It involves the selection of a course of action from the wide repertoire that is usually available to the actor. From Figure 3-6, it follows that the action alternative that is chosen is a function of many considerations that include the meaning given to situations as well as a classical means-ends calculation on the part of the actor.

3.3.2.5 Retrospective Sensemaking

Sense making is not only prospective, but it is also retrospective. George Herbert Mead (1956, p. 136) observed that 'we are conscious always of what we have done, never of doing it. We are always conscious directly of sensory processes, never of motor processes; hence we are conscious of motor processes only through sensory processes which are their resultants.' Actions are known once they have been completed. Thus the actor is always a bit behind on his actions and of those of others. By the act of interpreting experience, actors make sense of the experience.

Retrospective sense making implies that actors interpret experience *once it has occurred*. It also implies that current experience influences the act of sense making. Thus making sense is path dependent, but not restricted to the past. Current experience influences the meaning that is given to past experiences. Therefore, the retrospective sense given to experience holds more information, than was available at the time the experience occurred; i.e. before it entered short-term memory. Since the experience that is subject to sense making has elapsed, it only exists in short-term memory. Therefore, all events that

influence the working of short-term memory will have an influence on how sense making occurs and what the outcomes are. The concept of retrospective sense making also makes problematic the often-used unit of analysis: *stimuli-response*. Within the reasoning of retrospective sense making the response (action) necessitates the fabrication of stimuli (reason) instead of the other way around.

This effect of retrospective sense making was noticed by Garfinkel (1967). He observed that members of juries in court were inclined to formulate a verdict prior to formulating a sensible explanation for their verdict. They were effectively making sense of their decision retrospectively, using the facts at their disposal. Post decision outcomes are used to construct pre-decisional histories. This also happens on a smaller scale, when actors discover the nature of the situations in which they are acting. Actions are first order determinants of the situations in which actors *find* themselves. They serve as clues to interpret the environment. As such, actors are generally unable to account for their actions in advance. Rather, they engage in retrospective sense making, where they motivate actions in terms of facts that were discovered by virtue of their actions.

When actors engage in retrospective sense making of acts, they are using outcomes that are only partially attributable to their specific identifiable actions. Moreover, the action could have changed the environment to such an extent that it changes the sense of the action in itself. Success and failure of any action is measured by the reactions of the environment. Therefore, the environment plays an important part in the type of rationale that actors provide for their actions. Moreover, the environment has already changed under the influence of elapsed action. Hence, the retrospective judgement of the action occurs in a setting with more information on the outcomes than when the action was conceived. In conclusion, it may be fruitful to acknowledge that action is only meaningful in relation to its impact on the surroundings of the actor, as well as the influence this impact has on the meaning that is given to the action. Additionally, the outcomes of the actor's actions are likely to be visible to the outside world. Therefore, he is likely to be committed (commitment is the level of association) to the outcomes of the action. Actors make sense retrospectively by observing the outcomes of their actions, but so do others. This public visibility is likely to lead to increased commitment. The next sub-section will elaborate.

3.3.2.6 Commitment

Salancik (1977) offers a conceptualisation of commitment: 'commitment is the binding of the individual to behavioural acts' (p. 4). Commitment is about the degree to which someone can be associated with specific courses of action. Under certain conditions of change, new actions are invented and commitment helps to bind people to these actions. Salancik states that 'people will tend to behave in ways that are consistent with the implications of their past behaviors' (1977, p. 7). The more committed a person is to a

specific course of action, the more likely it is that the person's future acts will be in line with the previous acts. The definition of commitment makes the sequential position of committed action clear. It occurs *after* the action. Action is a prerequisite of commitment. This becomes clear when the determinants of commitment are discussed:

Explicitness. The more explicit an action is, in terms of observability and unequivocability, the more one can be assumed to be committed for it. This factor has to do with the undeniability and the precise nature of the action. To be able to be publicly committed to a course of action, there must be agreement that the action has occurred and that people have agreed on its traits.
Revocability. Actions can sometimes be seen as tests. We try them, and see if they work out. Sometimes they do not, and we are at liberty to undo them. People can pull out of action, by revoking them. But one commits to some courses of action once initiated: 'Pulling the trigger of a loaded gun pointed at a friend commits all to its gross reality' (Salancik, 1977, p. 4). Salancik argues that the ability to revoke action influences the degree of commitment to that action. The more revocable action is, the less one can speak of commitment.
Volition. Volition is not absolute, but relative. There is always some degree of choice whether to enter into action or not. Even when confronted with violence, an individual may select between several courses of action. However, a number of elements can indicate volition: choice; the presence of external demands for action; the presence of extrinsic bases for action; and the presence of other contributors to action. The higher the perceived degree of volition, the more commitment may be observed for specific courses of action.
Publicity. This is relatively easy. The more an individual is publicly responsible for a specific course of action, the more he is committed to defending this course of action. The action serves as a proxy for specific characteristics of the individual, since he is publicly bound to the action. He is not only motivating his action, but he is motivating his own traits and this could even be extended to include identity.

Interpreting commitment from a sense making perspective has at least two consequences: first, commitment influences how people make retrospective sense of the experience they encounter as a result of their action. The degree of commitment influences the terms in which people justify their actions towards others[1]. And second, commitment is the root of further action. As noted above, people generally act in line with their previous behaviours. Commitment to specific behaviour (binding people to action) will therefore influence the options that one has when it comes to future action. In other words, committed action in this framework reflects the fact that people constrain themselves by committing to current

[1] It may even be possible to state that action to which one has not committed at all, does not require retrospective sense making. Moreover, one may argue that script driven action does not involve volition, and may therefore not be considered as committed action. Both arguments would imply that committed action and conscious action, as opposed to scripted action, occur in lock step.

actions that limit their future action choices. It is unlikely that an individual will act in contradiction to earlier actions he was committed to.

3.3.2.7 Updating of expectations and view of social setting, script modification and routinisation

In this phase, the actor is in a unique position. He is not only able to see the results of his selected course of action, but he is also able to relate these results to his original objectives. Through retrospective sense making, the actor has already formulated explanations for deviations, but these 'lessons learned' can now be included in the cognitive structure of the actor. In the future, this helps the actor in formulating expectations, for similar classes of situations. The energies invested in retrospective sense making are therefore by no means lost. Rather, the experiences and elapsed actions (including the sense made of these experiences and actions) become part of the actor's perception on how his social setting works, and how he can best deal with it. Future events will therefore be perceived in terms of current experiences. A social setting is the social group that is relevant to the actor at a specific time and place. Often, it is the group in which the actor has performed the action, but it can also entail a different group that is relevant. For example, although one ordinarily asks for a raise at work, the family may be a relevant group that defines the reason for the action of asking for a raise. A social setting can thus be broader that the time and space of the actual execution of the action. An actor tends to update his view of the social setting based on his experiences and the reactions he observes on his actions. In other words, views of social settings are likely to be altered as a result of elapsed experiences.

The process I described does not lead to script modification per se. According to Gioia & Poole (1984) script modification is likely when the situation leading up the actions are infrequent. This means that the situation is relatively novel, but it is expected that it will become recurrent. Finally, when the adapted scripts are likely to be frequently and collectively performed, routinisation of the action may be observed. This explanation of script modification and routinisation is rather limited here, but it will be explored further in chapters 9 and 10 of this thesis.

It might be construed that each experience that is lifted out of the experience-stream will follow a path as depicted in figure 3. This is probably not true. The figure is an analytical tool that helps to visualise a process that cannot be observed directly in these terms. It does however contribute to existing knowledge in that it attempts to translate the effects of a collective and self re-enforcing process of institutionalisation to an individual and its equivalent manifestations of regularities.

3.4 Discussion

This chapter has addressed changes in routines and scripts at the level of the individual. Starting from the realisation that routines are observable representations of institutions, it explored how routines are susceptible to change. Knowing more about the resistance and/or susceptibility to change of routines is important in order to explain the effects of change processes on individuals in social settings. Although it is very helpful to discuss institutions and the institutionalisation of routines, this work focuses on the effects on individuals, as these are the observable units of analysis of organisations.

The chapter suggests that routines can be resistant to change when they are accompanied (invoked by) scripts. These scripts themselves are important to this analysis as they prevent individuals from overseeing all relevant information that does not fit existing scripted knowledge. The Ford Pinto crisis was used as an example. It led to the realisation that only routines that are governed by scripted knowledge are essentially resistant to change, as these can be invoked with little conscious reflection. Then the chapter discusses the theoretical situation of stability, in which individuals can deal with events by the performance of scripts. It argues that specific cues are associated with specific scripts. This allows many actions to be performed without a high degree of reflectiveness. The chapter then discusses in Figure 3-6 the theoretical situation of change, where cues can cause emotional discomfort through contrast, surprise and change, as no scripts are available to allow the individual to deal with the events that the cues pointed to. People then attempt to make sense of their experiences and through this process of sense making, they provide meaning to these experiences. If the events leading to this process of sense making are recurring and their initial responses were satisfactory, people may introduce these responses in their cognitive frames. This means that they associate the cues with the action, which can be included in their repertoire of scripts.

When seeking explanations for institutional change at the individual level, one essentially needs to explore changes in scripts themselves (first and second order change). Also, one needs to recognise that scripted knowledge may prevent actors from processing new information. However, when surprise, shock, and contrast cause actors to realise that some events cannot be dealt with by their current repertoire of scripts, they can engage in sense making. They can make sense of these events to provide meaning and to formulate appropriate actions. Under specific conditions, these actions can be included in their repertoire of scripts, which can lead to the emergence of new collective routines, if further conditions are met. Understanding how routines emerge is an important element in understanding institutional change (Burns & Scapens, 2000). The framework does not depict institutionalisation of routines, as that process takes place outside of the scope of a particular individual. It requires a focus on the collective, rather than the individual. Chapter 10 will develop a view on the process of institutionalisation of routines and scripts. Chapter 11 will include the ideas about both the individual and the collective in a framework that includes the findings from the empirical part of this thesis.

The framework presented in this chapter will allow us to explore a massive change program at the Dutch Rabobank. This change program entails the implementation of Results Oriented Management at most of the 350 local member banks. The program, which is a sophisticated method for the planning & control cycle at the Rabobank, was originally aimed at providing the tools for improved planning & control at the branches of this cooperative bank (first order change). But as the program proceeded, it exposed a need for behavioural changes at these banks; i.e. changes in beliefs concerning the purpose of the bank (second order change). As a result, at some banks, the program was implemented as a means to influence action choices of all organisational participants, and to allow them to act in a more 'result oriented' manner. The researcher will use the framework developed in this chapter to interpret the events surrounding the ROM program. Before turning to that topic, the case setting needs to be properly introduced. The Rabobank, being a cooperative organisation is somewhat different to the 'typical' stock exchange quoted organisations. The next chapter will provide a detailed description of the Dutch Rabobank; its history, its structure, and the precise nature of the ROM program.